Lectures
ON THE
PHYSIOLOGICAL PATHOLOGY OF THE BRAIN.

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LECTURE I.—PART X.

ON A GREAT VARIETY OF FORMS OF PARALYSIS DUE TO DISEASE IN ONE SIDE OF THE BRAIN.

The altern paralysis may appear from lesions in the centre of the pons Varolii—The altern paralysis may appear from lesions in other parts of the brain than the pons Varolii—A paralysis may appear in the arm or in the leg alone from a lesion located in any part of the encephalic centres.

BEFORE concluding this lecture, two points remain to be discussed: the first relates to the coexistence of paralysis of one side of the face with paralysis of one or two limbs on the other side—a combination which has been called altern paralysis; the second relates to the limitation of paralysis to either the arm or the leg alone. I will first discuss some of the questions concerning the altern paralysis.

12. *The altern paralysis may appear from lesions in the centre of the pons Varolii.*—To understand easily what I have to say on this point, it is essential to have present in mind the common type of altern paralysis—that which we usually observe in cases of disease limited to a lateral half of the pons Varolii. In such cases there is almost always an alteration of the fibres of the facial nerve at or near the place where they enter the medulla oblongata and the pons Varolii, so that the paralysis of those fibres is characterised by the two following features, which make it differ from the ordinary facial paralysis depending on disease of one of the cerebral lobes: 1st, the face is paralysed on the side of the lesion in the pons just as it is when the trunk of the facial nerve is injured; 2nd, the orbicularis palpebrarum is paralysed as well as the other muscles animated by the facial nerve. In other words, there is a paralysis of the facial nerve, and not simply of some of its fibres, as is generally the case when disease exists in other parts of the brain than the pons.

In addition to this direct facial palsy, a lesion of a lateral half of the pons usually produces a crossed paralysis in one or two limbs. In another lecture I will show that the study of disease of the pons furnishes a variety of arguments against the universally admitted views concerning the mode of production of paralysis. The seat of the will power for the movements of the facial muscles and of the limbs is considered as being in the corpora striata and in some parts of the convolutions of the brain, and therefore above the pons Varolii. The conductors between that seat and the muscles of the face and of the limbs are supposed to decussate somewhere in the pons Varolii and the medulla oblongata. How to reconcile these suppositions with facts showing that disease of one side of the pons may produce paralysis of the limbs on either the corresponding or the opposite side, or not cause it in any marked manner? How is it that in many cases of lesion of one side of the pons Varolii we find both the face and the limbs paralysed on the same side, instead of finding that peculiar type, the altern paralysis? How is it, besides, that we find a lesion occupying the whole lateral half of the pons producing nothing but the altern paralysis, while it should give rise to paralysis of the two sides of the face (as was twice observed by Dr. R. Bright*) together with hemiplegia of the opposite side? I need not explain that, owing to the decussation of the fibres of the facial nerves, an alteration of a whole lateral half of the pons Varolii must necessarily paralyse the nerve of the opposite side as well as the one of the same side—one before, the other after, that decussation.

But there is a point on which I wish now to insist; and that is, that a central lesion of the pons Varolii ought not to produce an altern paralysis. Therefore, if I show, as I will now try to do, that this kind of paralysis sometimes arises from such a lesion, I shall offer a good argument against the received views concerning the mode of origin of paralysis.

Such cases have been published by Dr. Martineau,* Mr. W. F. Barlow,† Dr. J. W. Ogle,‡ Dr. Hillairet,§ and other observers,‖ and it is clearly impossible to reconcile them with the admitted views. The only door of escape for those who wish to continue in their belief of the correctness of these views is to make the supposition that a mistake was committed, and that the lesion was one-sided and not central. But the possibility of a mistake only extended to this point, that the lesion was a little greater in one side of the pons than the other. If such was the condition of the pons Varolii in those cases, there ought to have been, instead of a simple hemiplegia, a double one, the limbs on one side being less paralysed than those on the other side; and as regards the face, there ought to have been a paralysis of both its sides, owing to the necessary alteration of the decussating fibres of the facial nerves. A mistake of greater extent than that I have just mentioned cannot have been committed by such observers as those I have named; and even if we could believe that they were able to have committed it, no one will dare to suppose that morbid specimens shown to such Societies as the Pathological of London, and the Anatomical and the Biological of Paris, can have been very different from what they are represented to have been by the medical men who published the cases mentioned. I will show in another lecture that these facts are in perfect harmony with the views I hold, and I now pass to another argument.

13. *The altern paralysis may appear from lesions in other parts of the brain than the pons Varolii.*—Before giving an indication of the number of facts supporting that proposition, I must say that I could swell considerably the list of such facts if I considered, as is done generally, that there is a facial paralysis on one side when the face is drawn on the other side. It occurs sometimes that one angle of the lips is drawn upwards and backwards, not because the face on the other side is paralysed, but because there is a spasmodic state of the muscles where the traction is observed. This convulsive state may appear alone, and it may coexist with a paralysis in the opposite side of the face. The ordinary kind of facial paralysis, due, in most cases of hemiplegia, to disease of the brain above the pons Varolii, may exist without any such spasm of any muscle of the opposite side; but it is not rare at all, especially in cases of softening of the brain, that in this opposite side the upper lip is lifted up by a muscular spasm. When, therefore, nothing is done to ascertain in a direct way that there is a facial palsy, the statement that the face is drawn on one side cannot be sufficient to establish that there is a paralysis on the opposite side to that where the contracted condition exists.

But there are many cases in which statements were made leaving little or no doubt that the face was paralysed on one side and the body on the opposite side. Among the cases I might mention I will only point out the following: In two cases of softening of the *left* anterior lobe, one published by Duparcque,¶ the other by Tennyson,** there was a paralysis of the *right* arm and of the *left* side of the face. In a remarkable case recorded by Dr. Delioux de Salignac,†† there was a large cyst in the *left* middle and anterior lobes, causing paralysis of the *left* side of the face and of the *right* limbs. In one of those cases which led Prof. P. Broca‡‡

* Guy's Hospital Reports, vol. ii.

* Bulletins de la Société Anatomique, vol. XXXV., 1860, p. 311.
† Transactions of the Pathological Society, vol. IV., 1853, p. 28. See what I have already said of that remarkable case in THE LANCET of Sept. 16th, p. 389.
‡ Trans. of the Pathol. Society, vol. XII., 1861, p. 4.
§ Comptes Rendus de la Société de Biologie, 1860, p. 116.
‖ Cases not so decisive as those I have quoted are to be found in the Bull. de la Soc. Anat., vol. XXX., p. 204; in the Biennial Retrospect, New Syd. Soc., 1872, p. 92 (an interesting case of Dr. Broadbent's); in Copeman's collection of cases of apoplexy, 1845, p. 23; and in St. George's Hospital Reports, vol. IV., 1869, p. 265 (a case of plugging of the basilar artery).
¶ Archives Générales de Médecine, &c., 4ème série, 1853, vol. XXVIII., p. 167.
** Union Médicale, Paris, 1863, p. 580.
†† Gazette Médicale de Paris, 1861, p. 202.
‡‡ Bulletins de la Société Anatomique, Paris, 1861, p. 343.

to his views about aphasia there was disease of the *left* anterior lobe and of the left corpus striatum, causing paralysis of the *left* buccinator muscle and of the *right* limbs. In a case of complete paralysis and anæsthesia of the *left* limbs, with *right* facial palsy, Dr. Jarrin* found softening of several convolutions of the *right* anterior and middle lobes and of the *right* corpus striatum. In a case of meningeal hæmorrhage over the *left* hemisphere, with alteration of the *left* corpus striatum, Wenzel† found a paralysis of the *right* limbs and of the *left* side of the face. Dr. Thomas Mayo‡ has put on record a case of palsy of the *right* side of the face and of the *left* limbs in which the lesion was a clot in the *right* corpus striatum. Even the cerebellum can cause an altern paralysis. Dr. Martineau§ relates a case of softening of the whole white substance of the *right* lobe of the cerebellum, with paralysis of the *right* side of the face and of the *left* limbs. The meninges, the medulla oblongata, and the rest of the brain were healthy. It cannot be said that the disease had extended to the pons Varolii, as there was neither a paralysis of the right eyelids nor anæsthesia of that side of the face.

I shall have, in another lecture, to revert to the subject of the altern paralysis. I will then show that there are a number of cases of disease in both sides of the brain which, instead of causing a double hemiplegia, only produced an altern paralysis.

In the cases above mentioned there was a direct and a crossed paralysis, the direct being the facial palsy and the crossed being the loss of motion of one or two limbs. There are other cases of altern paralysis in which the reverse has been observed—that is, the crossed paralysis was in the face, and the direct was that of the limbs. I shall hereafter make mention of these cases.

14. *A paralysis may appear in the arm or in the leg alone from a lesion located in any part of the encephalic centres* — In the next lecture I will show how great and, I think, decisive is the meaning of the facts on which this proposition is grounded, against the view that paralysis depends on the loss of the function of the part diseased. I hope also to show fully then that if we admit, as is generally done, that certain parts of the brain are endowed with certain special motor functions, and others with other functions, there should be no paralysis when a brain-lesion is in parts of the organ that do not belong to the voluntary motor apparatus, and that if a paralysis occurs in one limb alone, it should be due to a lesion either of conductors going to the pretended centre for the movements of that limb, or to a lesion of that centre itself. For the present all that I intend doing is to give a short account of a number of cases to prove that paralysis of either the arm or the leg alone can be caused by disease of almost any part of the brain.

The two views that have been put forward as regards the existence of distinct centres for the movements of the arm and those of the leg are very different one from the other. According to the first, which has now only an historical interest, the arm has its motor centre in the optic thalamus and the posterior part of the brain, while the leg has its centre in the corpus striatum and the anterior part of the brain. Saucerotte, Pinel Grandchamp, Foville, Lacrampe-Loustau, Serres, and Bouillaud are the most eminent men who have proposed or maintained that view. Since the discoveries made by Fritsch and Hitzig the psycho-motor centres for the arm, the leg, the face, &c., have been considered as existing in the convolutions of the brain. This view, held by most able men, and especially in this country by Dr. D. Ferrier and Dr. J. Hughlings Jackson, I will discuss in another lecture. Leaving aside the convolutions of the brain, about which it will be necessary to compare with paralytic symptoms convulsive manifestations, I will now show that disease in most parts of the brain can produce paralysis of the arm or of the leg alone.

The two following features are known to be extremely frequent in cases of paralysis from brain disease: that in hemiplegia the arm is usually more paralysed than the leg, and that if both limbs are at first equally paralysed the recovery of power is generally more rapid and greater in the leg than in the arm. These differences between the arm and the leg have so little to do with the greater frequency of disease in the pretended centres of motion in one or the other limb that we find them whatever is the part diseased. In cases of atrophy of the brain, in which either a whole hemisphere or one lobe only is diseased, and in which the autopsy is often made after the persistence of life for a considerable number of years after the beginning of the disease, the general rule is that the arm is more paralysed than the leg. The valuable papers of Breschet, Dugès, Cazauvielh, Sims, and Cotard, which I will quote by and by, give many proofs of the correctness of this assertion.

The anterior lobe of the brain often produces paralysis of only the arm on the opposite side. Here are a few cases to show this. In a patient who died of a tumour of the anterior extremity of the left hemisphere, Lallemand‖ found no other paralysis than that of the right arm. The same excellent observer¶ saw a patient in whom after necrosis of the left side of the frontal bone the surface of the left anterior lobe became very hard, and adhered to the meninges. This patient had several attacks of paralysis of the right arm. In many cases of softening of the left anterior lobe the right arm was also paralysed. Among those cases I will mention one of Montault's,‡‡ another of Durand-Fardel's,§§ and a third of Cruveilhier's.‖‖ In a case of hæmorrhage in the left anterior lobe, Gintrac¶¶ found that the right hand was alone paralysed.

The middle lobe frequently also produces a paralysis of the arm. So it was in cases of abscess,** hæmorrhage,†† dropsy of a ventricle,‡‡ cancer,§§ or other tumours.

The same thing exists for the posterior lobe. Rostan‖‖ gives a valuable case of atrophy of the left posterior lobe having caused paralysis and atrophy of the right arm. Cases of hæmorrhage,¶¶ of softening,*** of abscess,††† &c.

Diseases of the corpora striata or of the optic thalami being very frequent relatively to diseases of other parts of the brain, it was to be expected that in many cases a paralysis of the arm would be caused by them. It is what we find. As regards the optic thalami, I take at random a few cases; I find one of cancer,‡‡‡ several of hæmorrhage,§§§ &c. As regards the corpus striatum, there are cases of softening, tumour, hæmorrhage, inflammation, &c. I will only name as the authors of those cases Lallemand, Maisonneuve, Serres, Lerminier, Jarrin, R. Bright, Chomel, Dufour, &c.

The pons Varolii and the medulla oblongata sometimes also will cause a loss of movement limited to one arm. In a case of Mr. F. Mason's‖‖‖ it was so. Here also the lesion may be a hæmorrhage, a tumour, &c., but the most common cause is a tumour.

In a few cases of disease extending to a very great part of a whole hemisphere, the same local paralysis was produced.

What I have said of the arm I can say also of the leg. Lesions of the anterior, or the middle, or the posterior lobes, or of the motor ganglia, can produce a paralysis of the leg alone or almost alone.

Is it not clear that if any part of the brain can produce paralysis of either the arm or the leg alone, we must reject the view that paralysis appears in consequence of the loss of the function of the diseased part?

* Gazette Médicale de Paris, 1833, p. 635.
† Quoted by Gintrac, loc. cit., vol. vi, p. 653.
‡ London Medical Gazette, Jan. 1847, vol. xxxix., p. 16.
§ Gazette des Hôpitaux, 1864, p. 606,—reproduced by Gintrac, loc. cit., vol. viii., p. 348.

‖ Recherches Anatomico-Patholog. sur l'Encéphale, vol. iii., p. 265.
¶ Loc. cit., vol. ii., 407.
‡‡ Journal Universel et Hebdomad. de Médecine, vol. ii., 1831, p. 311.
§§ Traité du Ramollissement du Cerveau, p. 28.
‖‖ Anatomie Pathologique, vingtième livraison, p. 10.
¶¶ Loc. cit. vol. vii., p. 124.
** Ducrot, quoted by Lallemand, loc. cit., vol. i., p. 368.
†† Bouillaud, Traité de l'Encéphalite, p. 76; Lerminier in Annuaire Médico-Chirurgical. Paris, 1819, p. 313; Lallemand, loc. cit., i., 371.
‡‡ Lerminier in Annuaire just quoted, p. 216.
§§ Berthol, Bullet. de la Soc. Anatom., 1855, p. 328.
‖‖ Loc. cit., p. 256.
¶¶ Andral, loc. cit., vol. v., p. 306.
*** Dan de la Vauterie, in Lallemand, loc. cit., vol. i., p. 9.
††† Bouillaud, loc. cit., p. 133.
‡‡‡ Andral, loc. cit., p. 652.
§§§ Védie, in Annales Médico-Psycholog., Mai, 1874, p. 345; R. Bright, Clinical Reports, vol. ii., p. 615.
‖‖‖ THE LANCET, vol. i., 1861, p. 361.

THE medical officer of health for Charlton reports the prevalence of scarlet fever and other febrile disorders in his district. There are public schools situated in the locality, and the utmost care and vigilance should be exercised by the managers to secure the children from infection.

SOME REMARKS ON AID TO THE SICK AND WOUNDED IN TIME OF WAR.*

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HAVING had the honour of being invited to read before this distinguished Congress a *précis* of an essay "On the Best Treatment of the Wounded in Time of War," for which Her Majesty the Queen of Prussia and Empress of Germany was so good as to award me a prize, I felt some hesitation in taking upon myself a duty which embraces so many points for consideration, and which in the time allotted me for addressing you could scarcely be discussed with any degree of minutiæ. However, seeing what good may be done in a very short time, and knowing the interest evinced by all classes, professional and otherwise, in everything concerning the relief to wounded in war, I should be neglecting a duty which I owe to humanity were I not to attempt under the circumstances to offer some remarks on a subject which has for me a special interest.

To give in detail the method of affording the first relief to wounded on the battle-field, how they are to be transported by the most easy method, how they are to be distributed, and the different plans of treatment recommended for wounds inflicted by special weapons, as well as wounds of different regions of the body, would each require a separate paper which might extend to any length, the subjects being so vast, and requiring in their consideration the opinions of numerous authorities of large experience. I shall therefore not attempt more than some remarks on points connected with the great importance of military surgeons and those engaged in the good work of aiding wounded having a knowledge of the method of constructing extemporaneous appliances, on the duties at the first and second line of surgical assistance, on the distribution and transport of wounded, and on arrangements of field hospitals, especially with reference to cleanliness and proper ventilation. These remarks must necessarily be very brief, but I trust will be found practical.

Anyone who has been actually on the battle-field and felt his almost helpless condition when surrounded by wounded in the agonies of death or suffering intense torture, must have wished that by some magic spell he could multiply a thousandfold his means of relief. For it is scarcely possible that any medical department or staff, however well organised, can bring into immediate use on the battle-field medical aid of sufficient strength or material of sufficient quantity to afford relief to the multitude of wounded whom modern implements of warfare give rise to almost simultaneously. It is therefore the duty of such medical officers and their attendants as may have the privilege of being at the front, not to think of the glory and excitement of battle, but to turn their undivided attention to the relief of their fellow-creatures; and in this, I am convinced, more may be done, by having a knowledge of extemporaneous contrivances and by making the best use of what they have at their disposal, than is generally supposed, and to the utility of which I scarcely think sufficient attention is paid in the preliminary education of surgeons, especially those destined for the public services.

Each civilised nation has its special pharmacy-waggon or panniers constructed and supplied with every possible appliance that forethought and experience can suggest for affording relief to wounded as soon as possible after an engagement; but how often do we hear of a breakdown in these, or that they were prevented by some unforeseen accident or block on the road from being in their proper position when required, consequently rendering the surgeon who has no ingenious turn of mind, or who has not been instructed in extemporising, helpless, inasmuch as he has none of the appliances at hand with which he has been accustomed to dress wounds, or put up fractures in permanent hospitals. I have therefore always suggested that surgeons accompanying troops into action should be selected, as far as practicable, as worthy of the post from their special aptitude in having resources at hand for all emergencies; that about them they should carry a pocket case of instruments, well-furnished with silk, needles, &c., a small supply of lint, two or three bandages, adhesive plaster, tourniquet, a flask of wine or brandy, and a hypodermic syringe, with a small phial containing two or three drachms of solution of morphia. He should also have a good clasp-knife for removing boots, cutting clothing, and shaping splints from such materials as may be available. An orderly or attendant should accompany each surgeon, who should have a further supply, which may be carried in a field companion, or knapsack adapted for the purpose, which should contain flannel and calico bandages, lint charpie, splints such as can be adapted for long or short bones, plaster-of-Paris, a metal spoon, candles, tourniquets, tincture of opium or solution of morphia, a drinking-cup, essence of beef, matches, pencil and diagnosing-cards, but, above all, he should have a large flask of drinking-water. With such a supply, more especially as each soldier now carries a "first dressing," relief may be afforded to any wounded.

The question is frequently asked — Where are the wounded to be first relieved? and though many plans are laid down by experienced surgeons which are in theory excellent, the position will probably be decided for the surgeon by a nucleus being formed wherever he dresses the first man, to which those who can walk will find their way, others being carried.

The surgeon accompanying a battalion or battery can scarcely do more in the way of first relief when the forces are moving, than apply temporary dressings and check hæmorrhage, as in the event of his stopping to put up fractures, or tie arteries, &c., he will in all probability be left behind, and his services lost to his regiment, while his very presence might have a great influence on the minds of his men when a halt takes place. The wounded should then be transported to the bandaging stations, or second line of surgical assistance, for more permanent relief, and at these stations it is necessary to be very careful in selecting a suitable position, as when once wounded begin to arrive they may become too numerous to move without great trouble. The chief points, then, to look for are shelter, fuel, and water, without which wounded cannot be properly attended to.

The duties of the surgeon at bandage places are—first, to use means to avert danger, such as checking hæmorrhage and relieving shock; secondly, to divide the wounded into those hopelessly injured, those requiring prompt attention, and those fit for transport and slightly wounded. It has been recommended that the wounds should be carefully examined at the bandage stations by the surgeons, and the patients transmitted ticketed with diagnosing cards to prevent all further painful and unnecessary examination; but I am disposed to disagree with this, especially in penetrating wounds, and quite agree with Prof. Esmarch when he says he sees much less danger in not ascertaining on the battle-field where there are bullets, splinters, or foreign bodies in the wound, than in making an examination which might lead to the introduction of excitants of putrefaction on the finger. Who, in fact, could answer for the surgeons' fingers being clean? On the contrary, nothing could prevent them from being soiled with blood and other matters, through which septic processes might be excited. Besides, there is the possibility of constitutional syphilis being present, and the result of introducing the blood of a syphilitic patient into another man's wound might be attended by most grave consequences.

The importance of the surgeon and his attendants being acquainted with the several methods for extemporising stretchers and other conveyances cannot be over-estimated. As here, at the first and second line of surgical assistance, the regular transport may not be forthcoming, he may be obliged to convert the men's tunics or great coats, with the barrels of rifles lashed together for side poles, into stretchers; or stretchers may be constructed with hay or straw ropes or ordinary rope, or the straps from two or three soldiers' belts interlaced between two poles. Blankets, sheets, hides, and even knapsacks, form excellent stretchers; and ships' hammocks or cots, if suspended on poles, form convenient modes of conveyance, and were found most comfortable during the recent campaign

* Being a paper read before the Brussels International Congress on Oct. 2nd, 1876.

in Ashantee, where the poles were carried on the heads of natives.

Country carts may be adapted for the conveyance of wounded, as frequently occurs in India, where they are filled with straw or small branches of trees, a sack or mattress being placed on the top for the support of the patient. And in the exhibition now being held in this great city, where there is an unparalleled collection of appliances for the relief of sick and wounded in war, I observed a country cart extemporised for the transport of two wounded by Surgeon-Major Smith, of the Norwegian army, which I consider is worthy of our special attention.

The construction of extemporary splints, pads, or cushions, is important; the former may be made from articles found about a field-of-battle, such as boards from the interior of a soldier's knapsack, twigs, rushes, straw, strips of leather, laths, boards, soldiers' rifles, swords, bayonets and their scabbards, strips of tin or sheet-iron, and the bark of trees. During the late Franco-German war, telegraph-wire having been found in large quantities along the roads traversed by the contending armies, I considered the advisability of utilising it, and can now pronounce splints made from it as being most serviceable. While on the subject of splints, I must not omit to mention the most important we possess for the battle-field. I mean those made of plaster-of-paris, which Pirogoff lays claim to having instituted, but which have been perfected by Dr. Port, of Munich, and Neudörfer, of Vienna; but in making use of them, it is as well to bear in mind the excellent remarks of Prof. Billroth, who says: "The only thing against it (plaster bandage) is, that surgeons who have not already treated open fractures with the plaster dressings, and are not adepts in the application, should not make their first experiments on gunshot-fractures, but should only apply the dressings with which they are familiar."

Extemporary pads and cushions I need scarcely refer to. They may be made from articles of clothing, felt, cavalry saddle-cloths, cotton-wool, tow, oakum, chaff, shavings of cork or horn, cut straw, hair, cut-paper, feathers, dried seaweed, bran, dried leaves, and sawdust, which latter, if from any of the pine species, will be found to have highly antiseptic properties. It will be observed that in the use of all extemporary appliances great care should be taken in their construction and application, as any want of such may convert a simple injury into one of a grave nature.

It has been recommended that the applications to wounds on the field should be of the simplest kind—a piece of wet lint or linen covered with gutta-percha tissue, or oiled silk retained by plaster or light dressing, will be quite sufficient.

It has, however, been suggested that the antiseptic treatment of wounds should be adopted on the battle-field. This, in the opinion of some, is impossible, in consequence of the difficulty in procuring well-skilled attendants and the necessary supply of materials, to say nothing of the time. Still in a modified form it may be applied with advantage, more especially when we have on the authority of Professor Esmarch three cases of perforating gunshot wounds of bones and joints healing without suppuration or fever. With the possibility of such success the wounded soldier has as much reason to expect the provision of skilled attendants, material, and time, as his country has that he should be supplied with the latest patterns of rifle and ammunition at unlimited cost.

With regard to performing amputations or excisions at the first line of surgical assistance, or even at the bandage-places, it is now generally admitted that, however desirable, inasmuch as they might be attended with greater success than at a later period, still they would take up too much of the time of the surgeon, while other wounded would be obliged to do without any aid; and on this point we have the authority of the distinguished Russian surgeon Pirogoff, who remarks that surgical work done on the field of battle is but waste of power, and scarcely less useless than the feverish practice of the bandage-places; and that the rapid firing of recent weapons produces such a crowd of wounded that ambulances are immediately thronged, and reliable diagnosis between the cases suitable for operation and conservative surgery rendered impossible.

I would now refer to the necessity of those engaged in the relief of sick or wounded being acquainted with the several methods of lifting them from the ground, of transferring them to stretchers, or from stretchers to waggons, railway trains, on board ship, or *vice versâ*. The rules laid down by Professor Longmore for the carriage of the sick or wounded on stretchers are complete in themselves, and should form a study for everyone likely to be engaged in such an office. Of late years, transporting sick and wounded by railway has been attended by most happy results; and there are now some beautifully fitted up railway carriages, specimens of which we have seen in the Exhibition, constructed with every means of comfort that the mind can suggest for making long and tedious journeys, and for the designs of which I believe we are indebted to Baron Mundy, of the Austrian army. Railway carriages, cars, and trucks have been adapted with extemporaneous fittings, some of which are remarkable for their ingenuity. I may specially refer to one by M. Zovodovsky, of the Russian army, who, by a simple method, suspends stretchers in freight cars, on which the patients are carried with the greatest comfort. The use of hammocks suspended in railway trucks for the carriage of sick or wounded has lately been experimented upon by myself with satisfactory results; and in the event of its being necessary to send sick or wounded by railway where there were not a sufficient number of suitable carriages, and hammocks were available, I should have no hesitation in having them so conveyed. There are, however, some cases unsuited for such a method of transport: I allude to fractures of the thigh and injuries of the spine.

With regard to accommodation for wounded after an engagement or during the occupation of a town, village, or protracted siege, experience has proved that the less wounded are massed together the better prospects they will have of recovery. Should, therefore, an engagement take place in the precincts of a town or village, public buildings, churches, stores, or barns, may be made use of for the purpose of collecting wounded and as a means of centralising them with a view to their being attended to with the least possible labour to the medical staff; but as soon as practicable—and it cannot be too early—they should either be distributed into houses with large well-ventilated rooms, and not overcrowded, or placed in huts or tents, or transferred, when their wounds admit of it, to the field-hospitals, where the necessary surgical operations may be performed, and whence those capable of further transport may be transferred to their destination. In sieges the wounded should receive their first dressings in the trenches, if there are any, a position being detailed under all circumstances out of line of fire, where wounded may be brought for relief; and if the distance is considerable from this bandage-place to the regular hospital, a temporary hospital should be established at some intermediate position, where primary operations might be performed with great advantage. During sieges, unless large well-ventilated buildings are available, the wounded should be placed in huts or tents, which are capable of being thoroughly ventilated, and may be s 'fted in case of necessity. It is now an admitted fact, whic. 'he experience of recent campaigns has shown, that wounded do better in huts than in permanent buildings, and best of all in tents, and that they are not so liable, when treated in huts or tents, to the terrible consequences, such as pyæmia, hospital gangrene, erysipelas, or phlebitis, which so frequently arise when located in permanent buildings; and as one proof among many others of their salubrity, I may here state that during my experience at the siege of Sevastopol, which extended over a considerable period, and the Indian mutiny, I never met with an instance of the foregoing diseases among the wounded treated in tents or huts.

It does not follow, however, that, though there be good ventilation and favourable circumstances, we are to neglect cleanliness about the patients, their bedding and clothes, or those of their attendants. This cannot be too strongly observed, as by the accumulation of dressings, poultices, secretions, or food refuse, the most serious complications may be promoted. I therefore invariably insist upon the destruction by fire of such articles as will burn, and bury the remainder in deep pits.

In laying out a hospital consisting of huts or tents numerous plans have been proposed, but all tend to the arrangement *en échelon* as being the best when circumstances will admit, otherwise in line. The medical staff and attendants should be conveniently situated, and latrines placed as far as practicable to leeward of the prevailing wind. The floors should be raised two or three inches, so as

to keep them dry in wet weather, and, if possible, they should be boarded. There should be good drainage, the ground should be cut away from the outside, and trenches should be formed round with a good fall. Ventilation, as I have stated, is of the greatest importance; but it must be observed that, though it is necessary, a wounded soldier may have too much of it, and in the treatment of gunshot wounds too low a temperature, or currents of air, may be attended by ill results. During the Crimean campaign and the late Franco-German war the influence of temperature on suppurating wounds was most remarkable, and in the Versailles hospitals, many of them, as remarked by the late veteran military surgeon, Stromeyer, took on an unhealthy action when the temperature of the wards became very low. It is therefore necessary that care should be observed in regulating the position of patients with respect to doors, windows, and ventilators.

There are many other points connected with the subject of this paper which I should like to refer to, but time will not permit. It is therefore only left me to express the very great pleasure I have experienced in having the honour of explaining to you, though very imperfectly, my views on certain questions relative to aid to the wounded in time of war.

CASE OF

TRAUMATIC ARTERIO-VENOUS ANEURISM OF THE POSTERIOR TIBIAL ARTERY,

TREATED SUCCESSFULLY BY LIGATURE OF THE ARTERY AND VEIN.

BY THOMAS ANNANDALE, F.R.S.E.,

SURGEON TO THE EDINBURGH INFIRMARY, AND LECTURER ON CLINICAL SURGERY.

IN this journal of the 24th of April, 1875, I published an account of a case in which I successfully ligatured the popliteal artery and vein for the cure of an arterio-venous aneurism involving these vessels. I now place on record a second case treated on the same principles, and with a like good result, as it confirms some of the remarks accompanying my first communication.

J. U——, aged twenty, was admitted into my wards in the Royal Infirmary on the 29th of February, 1876. Six weeks before his admission, he was struck, while at his employment, by a sharp piece of metal, which penetrated his right calf and caused a deep punctured wound. Profuse arterial bleeding took place, but this was checked by some of his fellow-workmen, who applied a pad and bandage over the wound. The following day he attended at a hospital, where the bandage was removed and the wound dressed, but the true nature of the case was not discovered. A few days after the accident the patient noticed a swelling and strong pulsation in the neighbourhood of the wound, but he continued to have his leg dressed daily for several weeks, until he became anxious in regard to these symptoms and asked my advice.

On admission, there was seen the cicatrix of a small wound about the centre of the posterior aspect of the right calf. At one corner of the cicatrix there was a small sinus, which passed down for about an inch and a half in the direction of the posterior tibial artery, but did not communicate with this vessel or any aneurismal sac. There was some diffused swelling round about the cicatrix, but situated deeply, and a well-marked bruit or loud blowing sound could be distinctly heard when the ear was applied over the swelling. This sound was not confined to the swelling, but could be heard for fully four inches above it, along the track of the tibial vessels. When the hand was placed on the swelling a characteristic thrill could be felt in it, and also along the course of the vessels for several inches above it.

From the symptoms there could be no doubt that the case was one of traumatic arterio-venous aneurism of the posterior tibial vessels, and graduated pressure was first tried for a few days, but the patient could not bear its application for any length of time, and no good resulted from it. Accordingly I decided to lay open the sac and tie both artery and vein at their wounded points, believing that this proceeding promised the most certain cure. On the 3rd of March I performed the operation in the following manner: The limb having first been emptied of blood by elevation, and a tourniquet applied round the upper part of the leg, an incision about five inches in length was made along the inner margin of the tibia, about the middle of the leg, the inner border of the gastrocnemius was exposed and turned aside, and then, by dividing the attachment of the soleus to the bone, and the deep fascia covering the posterior tibial vessels, the aneurismal sac was exposed.

I preferred making this incision to enlarging the original wound, because the latter was small, and did not now communicate with the injured artery, and I therefore considered that the former incision would interfere less with the muscles of the calf than the latter. The exposed sac was the size of a large walnut, and when opened into was found to contain principally fluid blood with a small quantity of coagulum. When this blood was sponged away, two distinct openings were found communicating with the cavity of the sac. A probe passed into these openings showed that one communicated with the posterior tibial artery, and the other with one of the venæ comites. It was also noticed that the injured vein was slightly dilated for some distance above the point of its wound. After a little careful dissection of the vessels at their seat of communication with the sac, a catgut ligature was applied first round the artery above and below the wound, and afterwards round the vein in the same manner. The operation was performed antiseptically, and the usual dressing was applied and continued until the 15th of March, when the wound, having healed in its deeper part, was treated by the application of boracic ointment.

On the 11th of April the patient left the hospital cured, and without the slightest trace of any aneurism.

A CASE OF EXTREME PLUMBISM TREATED BY GALVANIC BATHS.

BY S. J. KNOTT, M.R.C.S., &c.,

MEDICAL SUPERINTENDENT OF GALVANISM TO ST. MARK'S HOSPITAL.

I THINK this case one of great interest from the way it defied all drugs and yielded at once to the galvanic bath.

Samuel S——, aged thirty, a cab-washer, admitted June 22nd, 1875, under the care of Dr. Sieveking. There is a family history of phthisis. He has led a very intemperate life. For the last three months he has noticed he was losing flesh. A week before admission he had been drinking freely during the day, and sleeping at night in an omnibus, when he took cold, which was followed by an attack of delirium tremens. On recovering from this it was found he had lost the use of his upper extremities and his voice. He says for the last three years he has had the very first glass of beer and gin served in the morning—i.e., the liquor which had remained all night in the draw-pipe in contact with lead, at a public-house he frequented. During this period he has had colic three or four times. On admission he complained of pain in, and distension of the abdomen; the bowels were constipated, not having been moved for five days; the margin of the gums was fringed with a well-marked blue line. The man was wonderfully emaciated; if placed in the erect position he fell over in any direction if not supported, and he had not the slightest command over the flexors or extensors of upper or lower extremities, especially the upper, which seemed to have ceased to act at all. The deltoids seemed entirely gone, the head of the humerus could be traced in the glenoid cavity quite plainly, his ribs were covered only by skin; in fact, he looked more like a dried skeleton than a living person. The voice was just audible. Sensibility was good all over. The heart and lungs were normal. The tongue was coated with a thick, brownish-yellow fur, and the patient perspired rather freely. He was put to bed and ordered an ounce of castor oil immediately, and a soap enema four hours after.

June 23rd.—Has passed a very restless night, trying to get out of bed. Bowels acted freely; temperature 99° F.

Since his admission his urine has been collected and examined by Dr. Wright, the lecturer on chemistry, which gave $\frac{1}{2\frac{1}{100}}$ of a grain of lead per fluid ounce. And some of the gin and beer which he drank every morning for three years was also tested by Dr. Wright, and lead was found in both, especially the gin, which contained $\frac{1}{\frac{1}{10}}$ of a grain of lead per fluid ounce.

28th.—Still has restless nights. Appetite pretty good; bowels open; urine scanty; perspiration free; voice a trifle better. Temperature 100·2°. Ordered ten grains of iodide of potassium in an ounce of infusion of quassia three times a day, and twenty-five grains of chloral hydrate in an ounce of water at bedtime; to be faradised daily in upper extremities.

30th.—Faradisation commenced to-day. The ordinary Stohrer's two-celled battery put on at full power did not cause any of the muscles of the arm or forearm to act in the slightest. Bowels open; pulse 100, small; temperature 101·2°; slight cough, with some frothy mucous expectoration.

July 2nd.—Sleeps better at night now, without the chloral draught. Cough troublesome. Temperature 99°; pulse 124. Repeat mixture of iodide of potassium. Faradisation continued, but does no appreciable good at present. Has a good deal of twitching after it in the arms, probably from irritation to the sensory nerves only.

6th.—The same.

9th.—His general health is improved. Pulse 120; temperature 98·5°. Cough better. There is a slight attempt to swing the arms.

12th.—The same. Arms to be galvanised first, and faradised after.

29th.—Is a little better in his general health, but the paralysis is as intense as ever. He continued to be galvanised and faradised, and to take the iodide of potassium, from this date up to the 3rd of December, with hardly any benefit. Dr. Sieveking then kindly allowed me to have a thorough trial of galvanic baths.

Dec. 4th.—To-day, for the first time, he was placed in a warm bath 85°, and the water charged with 28 cells of the continuous current battery. At first the current was passed from the positive pole placed at the nape of the neck, to the negative at the feet. After ten minutes of this the negative pole was moved about along his arms, &c., and he was kept in the bath twenty minutes. Said he felt the galvanism a very great deal more in the water than when applied in the ordinary way.

17th.—Has had the bath every day since he commenced; can now swing the arms freely and flex them pretty well; he can also walk with but little help; says he feels much stronger and better; has a constant irritation all over him in the skin for ten or twelve hours after the bath; bowels, which were constipated before, are now quite regular; urine much increased in quantity; appetite very good; is certainly gaining flesh. To leave off all medicine and to have a pint of beer a day, with ordinary diet.

27th.—Is wonderfully improved; has gained several pounds in weight; his ribs are getting covered with flesh; can only bear eighteen cells now of the battery; complains of great irritation of the skin, with tingling, after the bath; sometimes it is so great as to wake him at night; can walk quite strongly now without any help, and can almost dress himself without help. To have bath only three times a week now.

Jan. 3rd, 1876.—Is looking quite well—in fact, except for a little weakness in the forearms, there does not appear anything the matter; can put either hand on top of head or on opposite shoulder. He continued in the hospital till Feb. 25th, more from kindness than necessity, as he was hardly in a fit state to return to his arduous work—washing thirty or forty cabs during the night. He came four or five times to see me after he left, and the last time he came he told me he had been driving a pair of ponies.

Remarks.—It is with great pleasure that I publish this case, as I think it well worth the attention of my professional brethren, who like to see the advance of medicine in any form. Here was a man whose health was completely undermined by the slow poison of lead, having sustained an enormous loss of muscular fibre, and who was placed under the usual treatment, which was persevered in from the 22nd of June to the 4th of December, with but slight benefit. He was then placed under the galvanic-bath treatment, and from the first of these baths the patient began to have new sensations, showing the immediate action on his system. From this time he continued to improve, and not only so, but he seemed to undergo a perfect regeneration of muscular fibre. On the shoulder, where there was formerly nothing but skin, gradually a new deltoid appeared to form. More than this, the fourth bath given to him was acidulated, to increase the strength, and he was placed in it the usual time, twenty minutes. Dr. Handfield Jones kindly took a gallon of the water, tested it, and found well-marked traces of *lead* in it. After this the water was prepared in the same way (without the man being placed in it), and was then tested with a negative result. If, then, lead can be removed, in fact extracted, from the system, why not mercury, arsenic, &c.? I have no doubt the man has been going on well, or he would have returned, for he was greatly pleased, and always ready to have his bath. I may add further, that cases of ordinary lead colic and dropped wrists which have been treated by this method have recovered in a few days, without any medicine.

Burwood-place, Hyde-park, W.

FERRUGINOUS PREPARATIONS IN SPECIFIC AFFECTIONS.

BY JOHN C. LUCAS,
SURGEON H.M.'S INDIAN ARMY.

ALL the preparations of iron, and more especially the perchloride and the pernitrate, will prove of considerable avail as a therapeutic, antiseptic, and preventive agent in all specific and zymotic maladies—viz., enteric fever, cholera, septicæmia, erysipelas, adynamic, puerperal fever, &c. We know that the hæmatinic virtue of this drug is largely needed in the cure, as well as in the prevention, of all these affections. In Asiatic cholera it is especially indicated when we come to consider the changes which the blood undergoes, and the morbid state of the vascular system, from the heart down to the minutest capillaries; the latter, particularly of the intestines and stomach, according to some modern pathologists, are said to be thrown into spasm, thus encouraging the liquid transudation, and for which antispasmodics are recommended. In cholera and typhoid, by its astringent and styptic action on the coats of the bloodvessels, it ought to prevent the transudation of liquids from the blood. By this means, in cholera it would tend to check the purging and vomiting unless the theory of salutary action be believed and acted upon, in which case this effect would be undesirable.

In the latter stages of typhoid fever it would arrest and prevent the diarrhœa, and likewise exert its topical action on the ulcerative process, prevent hæmorrhage, and favour the granulations of the intestinal ulcer.

In puerperal fever I can state from experience the beneficial effect of the drug in this disease, noticing the state of the blood in the gravid condition, the loss of the vital fluid during the process of parturition, and perhaps prior and subsequent to as it well, which is not an unfrequent predisposing cause of this sequel. I need hardly state that the hæmatinic and astringent actions of the drug are manifest. Its usefulness in erysipelas and septicæmia or pyæmia is well known to hospital surgeons.

The evacuations (intestinal) of patients taking iron are deodorised and blackened by the action of the acids of the fæces on the drug; in cholera, where the alimentary discharges are impregnated with the specific virus, by effecting chemical anti-bacteric changes in the dejecta passed by cholera patients, it deprives the low organisms of their vitality and specific virulence. And if this be the case the discharges, both of the stomach and intestines, would be rendered inert before they were voided. Professor Pettenkofer, of Munich, disinfects the dejecta of cholera and typhoid patients with the sulphate of iron, but after they are passed; how much better, as a sanitary measure, it

would be if we could accomplish the disinfection before the dejections are voided.

With regard to the antiseptic action, the same remarks may be applied to typhoid fever.

Concerning erysipelas, septicæmia, and puerperal septicæmia, or fever, it may be said that, as affections the result of blood poisoning, the remedy will, through the circulatory system, have its topical effect, and consequently, by whatever modes the affections are propagated, it would diminish the risk of contagion or infection.

Mode of administration.—It ought to be commenced with from the onset in large and repeated doses, from a drachm to two, of the tincture or liquor of the perchloride, or the liquor of the pernitrate, freely diluted in about three or four ounces of iced water. The remedy may as well be administered per rectum, especially in cholera and typhoid. In addition to being administered in cases of actual cholera and typhoid, I think it would prove of no inconsiderable avail if we could enforce its use in cases of premonitory diarrhœa of the former, or even give it, but in small quantities, to apparently healthy individuals when the diseases are prevailing in epidemic form, or when there is reason to expect an outburst of either. This latter is specially applicable with regard to our troops, who have sanitary as well as medical supervision. Each man in a regiment may be allowed the required quantity of iron to mix with his drinking-water, or what is still better and more certain, this may be done for him, so that what water he drinks will be sure to contain iron. The taste may, no doubt, be objected to; but, by explaining to the men what it is intended for, this little objection would be overcome without much difficulty; and even taking it for granted the iron did not answer these purposes, to say the least, it would have its tonic action, and thus strengthen the system against the diseases. It would, as well, free the water of its animal and vegetable impurities.

When erysipelas or septicæmia is raging in a hospital, the patients affected, as well as those not affected, but exposed to the poison, may be similarly treated.

In the same manner, when puerperal fever is prevailing in a lying-in institution, &c., the patients affected, as well as all recently confined cases, might be similarly dealt with. It would not be unadvisable to administer the drug in the latter months of utero-gestation.

Bombay.

ON AN AUSCULTATORY SOUND.

BY RALPH W. LEFTWICH, M.D.,

RESIDENT MEDICAL OFFICER, EAST LONDON CHILDREN'S HOSPITAL.

THE application of mediate auscultation to the detection of stone, though not new, has hitherto, I believe, been confined to the somewhat awkward expedient of placing a stethoscope upon the hypogastrium while the sound is rotated in the bladder. The "auscultatory sound," here described, is in many respects an improvement upon this. It consists essentially of an india-rubber tube, one end of which is provided with an ear-piece and the other stretched over the handle of a sound. The tube should be about twenty-five inches in length, and of a quarter of an inch bore. It must be composed of extremely soft and moderately thick india-rubber. The sound itself should be of solid steel; and, although the ordinary form answers very well, it is a decided advantage to have the extremity of the handle cylindrical or conical, so as to preserve the lumen of the tube. The ear-piece, made of vulcanite, is similar to that of a Gruber's otoscope or a Stern's stethoscope; it is intended to be inserted into the meatus, and maintains its position there best if bent to an obtuse angle.

Thus constructed, the instrument will be found to conduct sonorous vibrations with remarkable intensity and delicacy—indeed, the lightest rub on a polished surface can be heard with ease. In using it, it is necessary that the ear-piece be inserted into the meatus with sufficient firmness to retain its position there without being held. The sound should be held lightly between the finger and thumb and manipulated in the usual way; the grating noise, however, is so distinct that the tapping movement occupies a secondary place, and is of most use in refining the diagnosis and in distinguishing between a calculus and a deposit on the walls of the bladder. The value of the instrument in the simple detection of calculus is tolerably evident, but there can be little doubt that, with practice, its sphere of usefulness will be much extended.

Messrs. Arnold, of West Smithfield, have undertaken to keep a supply of them in various sizes.

PARTURITION IMPEDED BY OLD CICATRICES, OVERCOME IN THE SUBSEQUENT LABOURS.

BY EDW. F. WILLOUGHBY, M.B. LOND., L.R.C.P.

SIX years ago I was asked by a friend, now dead, to see with him a lady in the last month of her first pregnancy. When four years old she had been severely burned over the lower part of the body and the thighs, and the marks of the injury were still manifest. She could part her thighs but a short distance, the genital organs were devoid of hair, the vulva small and inextensile, and the perineum had the appearance of an extensive cicatrix. We determined on inducing labour at once by giving castor oil and ergot and rupturing the membranes. I returned in a few hours, and found the labour proceeding so rapidly that I could not wait the arrival of my colleague. The vulva was still rigid and inelastic as leather, while the fœtal head could be seen bearing down on the posterior part of the perineum, which it was distending, and threatened to burst through almost per anum. Supporting the perineum firmly, and urging the head forwards with my left hand, I made in the posterior margin of the vulva four incisions, two on each side, which I extended one after another as the advance of the head rendered necessary.

After delivery I left her to the care of my friend, and did not see her until she again engaged me to attend her. This time I brought on labour at the seventh month by ergot and fastening a gum-elastic bougie in utero; it came on more slowly, but she was delivered of a living female child, feebler than many of its age, but which has since grown healthily.

The next time I left her to the full term; the dilatation of the vulva proceeded very slowly, and, after having had her under chloroform for an hour and a half, with the occiput protruding during half the time, I was on the point of incising the margin when it suddenly yielded, and a very fine boy was born. The old difficulty was now overcome; a fourth child was born after little over an hour's labour, and before I could be sent for, they having removed to a distance.

The case seemed to me to be unusual and interesting. On the first occasion the lateral incision saved the otherwise inevitable laceration of the perineum and rectum, and the subsequent history shows the extent to which even the false skin of cicatrices will become relaxed by repeated distension, and the value of chloroform, not only in obviating the pain of that process, but in directly favouring the relaxation.

Canonbury.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—The annual meeting of this Society was held in the Library of the Newcastle-on-Tyne Infirmary on September 28th. The report of the Committee states that the affairs of the Society are in a highly satisfactory condition. "The work done during 1875-76 quite equalled in interest and importance, and far exceeded in amount, that of any previous session. Sixteen papers were read, sixty-one pathological specimens were exhibited, and sixteen patients were introduced at the meetings." The total number of members now is 154. The following were elected office-bearers for the year 1876-77:—President: Mr. G. B. Morgan. Vice-Presidents: Mr. S. W. Broadbent, Dr. L. Armstrong, Dr. Burnup, Mr. J. Hawthorn. Secretary: Dr. Bramwall. Committee: Dr. Philipson, Dr. Page, Mr. H. E. Armstrong, Dr. Arnison, Dr. Denham, Dr. Hume, Mr. Carr, Dr. Frain, Dr. Eastwood.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

CASES OF DISEASE OF THE HIP-JOINT TREATED BY EXCISION; CLINICAL REMARKS.

(Under the care of Mr. MAUNDER.)

BETWEEN the 10th and 21st of June last Mr. Maunder performed excision in several cases of hip-joint disease, all of which have done well. Subjoined are brief notes of the cases, supplied by Mr. Fisher, house-surgeon.

CASE 1. *Morbus coxæ; excision.*—Henry H——, aged eight, was admitted Aug. 13th, 1875, with symptoms of hip-joint disease, extending over two years. Disorganisation, with suppuration, followed. The upper end of the bone was removed June 10th, 1876.

CASE 2. *Morbus coxæ; excision.* — David B——, aged six years and a half, was admitted January 25th, 1876. Disorganisation, with suppuration of the right hip-joint, gradually supervened. The upper end of the femur and a small portion of the acetabulum were removed June 14th.

CASE 3. *Morbus coxæ; excision.* — Helen Q——, aged five, admitted March 29th, 1876. Disorganisation and deformity, without suppuration, having gradually supervened, excision was performed June 17th.

Mr. Maunder at the time of operation remarked that a very large majority of patients afflicted with hip-joint disease recover without operation; but it so happened that he had at that moment at least a dozen cases of disease of the hip-joint under care, and he thought the only chance of life for two of these, and of recovery without extreme deformity for one, was excision. He drew particular attention to the two processes of disorganisation of a joint, one with and one without suppuration. The knowledge that the gelatinous form of the disease may run its course without suppuration should encourage surgeons to promote recovery by fibrous anchylosis, and should deter them from hastily condemning a joint the seat of gelatinous change to excision or the limbs to amputation. Mr. Maunder further stated that he had at that time under observation three knee-joints the seat of fibrous anchylosis. He introduced a lad who had been under care for eight months, and who still continued so, but who walked into the theatre. When admitted operative interference seemed imminent, but, as the result of treatment, fibrous anchylosis might fairly be expected. In the hip cases operated on, two were suppurating freely and threatened life; in the third, deformity was great, disorganisation of the joint complete, and anchylosis occurring in a faulty position.

Although the following case is not exactly similar to those above-mentioned, it is of interest as showing the importance of removing dead bone as soon as the condition of the parts will allow.

CASE 4. *Morbus coxæ; excision.*—Christopher W——, aged eleven, admitted May 17th, 1876. Right angular deformity existed, with suppuration. The upper end of the bone was removed by a chisel without splintering, and then a sequestrum was extracted. This sequestrum was the cause of the persistent suppuration for seven years. The patient was soon in a fair way for recovery with the deformity rectified.

The following case was also operated on about the same date as the preceding, and has, like them, done well.

Strumous ankle-joint; excision.—John T——, aged five, admitted April 21st, 1876. There was a history of accident twelve months previously. Swelling and tenderness having increased rather than diminished under treatment, the ankle-joint was excised on June 21st. Mr. Maunder showed a patient whom he had submitted to this operation under similar circumstances many years ago. The man could walk with a scarcely perceptible halt, and was on his feet all day.

ROYAL LONDON OPHTHALMIC HOSPITAL.

APPARENT FAILURE OF HEART'S ACTION DURING INHALATION OF ETHER.

FOR the following notes and remarks we are indebted to Mr. Morton, M.B., senior house-surgeon. As the question "Ether or chloroform?" is still *sub judice*, the record of the subjoined case may prove interesting.

George S——, shipwright, aged forty-four, a strong, healthy-looking man, came to this hospital on the 25th ult. with his left eye lost by an injury sustained some time since. He consented to have the eyeball removed, for which purpose anhydrous ether, as prepared by Messrs. Robbins and Co. for general anæsthesia, was administered by Mr. Morton after the method always employed at this hospital—namely, a conical sponge hollowed in the middle, and lined with flannel. There was not nearly so much struggling as there is frequently, though there was some unwillingness to respire freely, and a tendency to dropping of the lower jaw, with falling back of the tongue; but by forcibly holding forwards the lower jaw by means of his beard the patient was fully anæsthetised in about seven minutes after inhaling about five ounces of ether. All went well to the completion of the excision, when, having removed the inhaler, though still holding forward the man's lower jaw, Mr. Morton was proceeding to compress the bleeding tissues when he observed that there was no hæmorrhage. The man's lips were then noticed to be very pale, as was also his whole face, and his respirations had ceased. Artificial respiration was at once commenced, and one of the assistants who was raising and lowering the arms felt that the pulse was extremely feeble. The tongue was also forcibly drawn forwards, as it had fallen far back in the mouth, although the lower jaw was being held forwards. After the artificial respiration had been continued some eight or ten times the patient made one or two feeble efforts to breathe, and the conjunctivæ were becoming sensitive, when one of the clinical assistants suggested the use of nitrite of amyl, four minims of which were accordingly given on a piece of lint, and the artificial respiration continued, but the patient soon began to breathe for himself, and speedily recovered consciousness, walking out of the theatre a few minutes afterwards.

This case seems to have been one of cardiac failure, as indicated by the pallor of the face and lips and the feebleness of the pulse, though it may be thought by some to have been due to an obstruction to the respiration from his tongue having fallen back. This is scarcely likely, for he had breathed to within very few seconds of the time that the absence of respiration and the extreme pallor were noticed. Further, Mr. Morton remarks that in all cases, now more than 500, in which he has administered ether, if there has been any obstruction to the respiration it has always been accompanied by intense congestion of the face and blueness of the lips; yet in some cases where vomiting is about to occur this is preceded by pallor and profuse sweating, but that does not apply to the present case, for there was no vomiting nor any tendency to it. It would be interesting to know whether others have seen cases in which there has been cardiac failure during the inhalation of ether, and it is important to note the fact that holding forwards the lower jaw did not prevent the tongue falling back, as it is commonly alleged to do. In conclusion, it may be stated that the patient has a slight mitral regurgitant murmur, and occasionally suffers from difficulty in breathing after a hard day's work.

EDINBURGH ROYAL INFIRMARY.

CASE OF DISLOCATION OF KNEE-JOINT.

(Under the care of Prof. SPENCE.)

FOR the following notes we are indebted to Mr. J. G. Garson, M.B., house-surgeon:—

D. K——, aged sixty, a miner, admitted on the 17th March, 1876, suffering from dislocation of the right knee.

Two days before admission, while walking up an incline in a coal-pit, the patient was struck on the right knee and knocked down by an empty truck, which had accidentally got detached and run down the incline. After he fell the wheel of the truck passed over his right knee.

On admission the head of his right tibia was found to be

displaced backwards, the displacement being most marked when the limb was extended, and almost absent when in the flexed position. The circulation in the injured limb was not interrupted, neither was the nervous sensibility affected. After trying to reduce the dislocation without success while the patient was under the influence of chloroform, the continuous extension apparatus was applied, with a weight of 16 lb. to the limb, and kept up for three days, the object of this being to tire the muscles which act on the knee-joint, and so afford a better chance of reduction. At the end of that time chloroform was again administered and reduction attempted, but again without success. On both occasions the manual method only had been employed. On the 22nd March the pulleys were applied, and as much extending force employed as was justifiable, but without effect; accordingly Professor Spence proceeded to open into the knee-joint under the antiseptic spray, and with thorough antiseptic precautions, by making a semilunar incision into it immediately below the patella, as in excision of the knee-joint. On opening the articulation it was found to be filled with blood-clot, the internal lateral ligament was ruptured, and the posterior part of the left semilunar cartilage displaced. The dislocation was easily reduced after the external lateral ligaments and tendons of the hamstring muscles had been divided. The wound was then stitched up, a large drainage-tube having been inserted, and dressed with the antiseptic gauze. A posterior splint, extending from the upper part of the thigh to the sole of the foot, was applied, and, in addition, the continuous extension apparatus, with a weight of 8 lb., so as to keep the dislocation reduced.

Previous to the operation the temperature was normal, never being above 99·4°, and continued so for five days after the operation, when it rose to 100·6°. The wound was dressed every day after the operation, and the healing process was going on favourably with slight discharge, but on the fifth day the discharge increased in quantity, and on examining it microscopically a few bacteria were seen in the field. As the wound was free from putrefactive smell, the antiseptic dressing was continued till the seventh day, when the discharge had a putrid odour, and was in considerable quantity, the temperature keeping between 100° and 101°. The antiseptic dressing was then stopped, and carbolised oiled lint applied. The temperature then fell to normal, and the discharge diminished. During the whole time the wound was quite healthy, though the healing process was slow. The drainage-tubes were lessened by degrees, till the middle of June, when they were discontinued, and by the end of the month the wound was entirely healed. Great care was taken during the after-treatment to get anchylosis of the limb in the straight position, and for this purpose, in addition to the posterior splint, lateral splints, and pressure from before backwards over the lower end of the femur, which had a tendency to project forwards, were used when necessary. The extension-weight was gradually diminished, till it was taken off altogether on the 15th of June.

He was sent to the Convalescent Home for three weeks on the 15th of July, and after his time there expired he went home, his knee being quite healed, but the posterior splint was still kept on to prevent yielding of the joint.

On the 13th of September he presented himself looking well, and the limb promising to be a very useful one.

HÔPITAL ST. LOUIS, PARIS.

PECULIAR FORM OF LUXATION OF THE EXTERNAL EXTREMITY OF THE CLAVICLE.

(Service of M. PEAN, under the care of M. NICAISE.)

THE luxation of the clavicle directly backwards over the acromion is a form which is rarely seen. In neither "Malgaigne" nor the "Dictionnaire Encyclopédique des Sciences Médicales" is any mention made of it.

Michel H——, aged eighty-one, shoemaker, native of Antwerp, came to the hospital, complaining of inability to use his right arm. On the 7th September, while crossing the street, his foot slipped as he was getting on to the pavement, and he fell on to the back part of his shoulder.

At first sight the case appeared to be one of luxation of the head of the humerus forwards, several of the symptoms of that form of displacement being present. But upon closer examination it was easy to determine that the head of the humerus had not left its cavity, and that there was in reality a luxation of the clavicle, and not of the humerus.

The symptoms were briefly as follows:—In front the internal extremity of the clavicle was prominent, the inferior and superior clavicular fossæ were effaced, and the distance between the middle line and the shoulder was diminished. At the shoulder the head of the humerus was found to be in its normal position. The articular surface of the acromion was found to be situated in front of the clavicle. Behind the acromion the external extremity of the clavicle could be readily distinguished. The articular surface of the latter was situated outside the acromion, and its anterior border corresponded with the posterior border of the acromial process. The head was slightly flexed, and turned towards the right. The elbow was separated from the body by a distance of ten centimetres. The spinal border of the scapula was prominent, and its inferior angle was pushed towards the spinal column. The movements of the arm were very limited, and caused much pain.

The patient was put under the influence of chloroform with the view of reducing the luxation, but this was found to be impossible; accordingly his arm was fixed in a sling.

M. Nicaise, who was doing duty at that time for M. Péan, proceeded to make some experiments upon the dead body, in order to determine the mode of production of this form of luxation. With the section of the acromio-clavicular ligament it was impossible to produce the luxation. The trapezoid ligament was then cut, and it was then found easy to produce the desired displacement. The conoid ligament was left intact. From these experiments it may be inferred that the rupture of the trapezoid ligament is necessary for the production of this form of luxation.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THIS Society met for the first time after the vacation on the 10th inst., the President, Sir James Paget, occupying the chair. The meeting was well attended, and the discussion on the two papers read during the evening was well maintained. It will be seen that both papers dealt with subjects in the province of the surgery of deformities; Mr. W. Adams summing up the results of subcutaneous division of the neck of the femur for anchylosis of the hip-joint, and Mr. Davies-Colley describing a remarkable case of resection of the tarsus in each foot for the relief of bilateral equino-varus. Opinion was divided as to the introduction of such an operation into practice.

The first paper read was entitled "Subcutaneous Division of the Neck of the Femur for Anchylosis of the Hip-Joint; with a table of twenty-two cases which have been operated upon up to the present time;" by Mr. WILLIAM ADAMS, F.R.C.S. During the six and a half years which have elapsed since the above operation was first performed by Mr. W. Adams on 1st Dec., 1869, he has collected from published and unpublished sources the details of twenty-two cases in which the operation has been performed, including five operated upon by himself. In the table accompanying the paper it is shown that the operation was successful in twenty out of twenty-two cases, death from pyæmia resulting in one case, and death accelerated by chronic suppuration following the operation in another case, that of a girl, aged eighteen years, who succumbed with symptoms of kidney disease and tubercular deposit in the lungs. Such a result bears good testimony to the general safety of the operation the dangers of which may be greatly diminished by the judgment of the surgeon in selecting his cases, and the skill shown in the performance of the operation. In cases where there is a doubt as to the possibility of the neck of the femur being divided subcutaneously in consequence of alterations which may have taken place at the articulation, it should not be attempted, but some other operation below the joint, such as that first proposed and successfully per-

formed by Mr. Gant, should be adopted. In two cases of anchylosis of the hip-joint, with malposition of the limb, Mr. Gant divided the shaft of the femur subcutaneously, just below the small trochanter, using instruments similar to those employed by Mr. Adams. This operation may be performed without difficulty or risk of hæmorrhage. Mr. Adams has twice divided with the subcutaneous saw the shaft of the femur for great deformity resulting from badly united fractures, and once the shaft of the humerus for straight anchylosis. No suppuration whatever occurred. Mr. Maunder has also operated in similar cases by dividing the shaft of the femur below the small trochanter, using the chisel and mallet instead of the saw—an operation resembling those performed by Langenbeck, Mayer, Pancoast, Brainhard, C. S. Little, and others. The general result of the operation in the twenty-two recorded cases has been to correct the deformity and to obtain bony anchylosis, with the leg in a straight position. In several cases useful motion has been obtained, especially by Mr. Jessop of Leeds, Mr. Lund of Manchester, and Dr. Sands of New York. The paper concluded with the interesting fact that Sir C. Bell in 1828 had proposed division with a small saw of the neck of the femur in the early stages of hip disease with a view to allow the head of the bone to remain at rest in the acetabulum, and the hope that a freely movable false joint would result at the seat of the operation. Bell pointed out that such an operation would be attended by small risk, and, although he never carried out his suggestion, it was interesting to note that it was brought forward three years before Stromeyer's operation of subcutaneous tenotomy.—Mr. HOLMES remarked that he had only performed the operation in a single case, which proved fatal, and in which, owing to the condition of the parts, the division of the neck of the femur was not subcutaneous. In many cases where anchylosis follows upon strumous disease it is impossible to make a subcutaneous section owing to the shortening of the neck of the thigh-bone, and the large amount of osseous deposits, fibrous thickening, and adhesions in the vicinity; and he expressed his regret that Mr. Adams had not stated the grounds upon which a selection of fit cases was based. The field of operation would be much narrowed if it were only resorted to where the joint was free from the parts around, as by such restriction the great majority of examples of anchylosis with great deformity would be excluded. In the case with which he had to do there was every reason to have hoped for a good result, the patient being a healthy lad of fourteen, who had anchylosis of the hip-joint with much deformity, curvature of spine, &c. The operation, however, was followed by suppuration, from which the patient gradually succumbed. It would then be of very great benefit to surgeons generally if Mr. Adams would lay down rules for their guidance as to the particular cases fit for operation. He doubted whether division of the shaft of the femur would correct deformity.—Mr. GANT said that he had introduced the operation of division of the bone below the trochanters for that class of cases for which Mr. Adams's operation was not applicable—viz., cases of strumous disease with destruction of bone and great shortening of neck. Mr. Gant showed the small saw, one inch and a half long, with its serrated edge broader than the back, and described the steps of the operation which he had himself performed in two cases.—Mr. MAUNDER said that probably no example in modern operative surgery could be found associated with such great success and apparently with so little risk to life, as subcutaneous osteotomy. Mr. Adams had formerly pointed out the pathological conditions to which section of the neck of the bone was applicable, but not those to which it was inapplicable. It was in consequence of failure of section of the neck of the thigh-bone associated with tenotomy and forcible attempts at extension, in a case of fibrous anchylosis following strumous hip-joint disease operated upon by himself, and failure a week subsequently in another instance by Mr. W. Adams, which led him (Mr. Maunder) to resort to division of the femur below the lesser trochanter with a view to remedy the deformity. This he had accomplished several times with chisel and mallet. In two instances slight suppuration occurred for reasons explained in his paper on the subject at the Clinical Society. In the remaining five cases (one of division to remedy deformity from faulty union after fracture) primary union occurred without the least suppuration. Mr. Maunder urged the necessity of the operator avoiding penetration of cicatricial tissue, owing to the readiness with which this new-formed material ulcerates. This he believed to have occurred in three cases known to him. He expressed surprise that, such decided success having attended the use of the chisel, Mr. Adams should speak of it as less subcutaneous than when the saw was used. Mr. Adams had himself performed the operation five times, and in one of these cases with an unfavourable result. It was even a question yet to be determined whether the chisel would not replace the saw.—Mr. HULKE, adverting to the statement that most of the cases in which subcutaneous osteotomy had been performed were examples of fibrous anchylosis, pointed out the value in such cases of gradual and repeated extension under chloroform, a plaster-of-paris bandage being applied to the limb after each sitting.—Mr. MAUNDER said that osteotomy had been gradually led up to by reason of the repeated failure of protracted attempts to promote extension to which Mr. Hulke had alluded.—Mr. ADAMS, in reply, admitted that the selection of proper cases was most important, and to this subject he had paid much attention in his pamphlet on subcutaneous osteotomy. The class of cases in which the operation could be performed were—1st, the rheumatic, where anchylosis had followed acute rheumatism, as in the first case upon which he had operated; 2nd, the pyæmic, where anchylosis ensued upon pyæmic abscess; and, 3rd, those only of a doubtfully strumous nature, in which the disease had been arrested in the first stage. In other cases, where the head of the femur was extensively destroyed, and change had taken place in the neck, Mr. Gant's operation might be performed. But, wherever practicable, the neck should be divided, as there was more chance of producing a false joint there than there was in the shaft. Since his paper was written Mr. Maunder had improved his operation by using one chisel instead of three, and there was no doubt that this great success was partly due to Mr. Maunder's skill as an operator. He thought the operation applicable to cases of fibrous anchylosis which resisted other modes of treatment; and as evidence of the operation being one well established in surgery, he pointed to the fact that the twenty-two cases related in his paper occurred in the practice of no fewer than twelve different surgeons.

A paper was then read on a case of Resection of the Tarsal Bones for Congenital Talipes Equino-varus by J. N. C. Davies-Colley, Assistant-Surgeon to and Lecturer on Anatomy at Guy's Hospital. Notwithstanding the recent improvements in the treatment of club-foot, cases from time to time occur which, from the age to which the patient has attained, the rigidity of the tissues, and the altered shape of the bones, present insurmountable obstacles to a cure by the ordinary methods. It is not improbable that many of these cases might be successfully treated in the way which was adopted in the following instance: Edwin H——, aged twelve, was admitted into Guy's Hospital on May 8th, 1875, under Mr. Cooper Forster. He was found to be the subject of severe talipes equino-varus, both feet being directed inwards, the soles backwards, the heels raised; and he could barely walk on account of the suppuration of bursæ which had formed on the back of the cuboid bones. He was kept in bed, and splints were applied. In September, 1875, Mr. Davies-Colley took charge of the case, and divided some tendons of the left foot. As very little advantage was thus gained, it was decided to take out a V-shaped piece from the tarsus. On the 12th of October this operation was performed. It was found necessary first to dissect out the cuboid bone, and then with knife and saw to cut away portions of the os calcis, astragalus, scaphoid, and cuneiform bones, together with the cartilage of the two outer metatarsal bones. There was troublesome oozing of blood after the operation, which was performed antiseptically; so a sponge was put in, and the foot left in its old position for a week. A peculiar splint was subsequently used in order to twist the anterior half of the foot into its proper position. He recovered rapidly, and on November 23 a similar operation was performed on the right foot. Less than six weeks after the second resection he was able to get about in a wheel chair. In nine weeks he could walk with help. In ten weeks the wounds were quite healed; all apparatus was left off, and he was able to walk alone. He was shown at a meeting of the Medical and Chirurgical Society in April last, and he could then run, jump, and hop with considerable agility.

He has since this time gone to work, and in September a letter was received from his father, which stated that he had walked six miles with but little fatigue. The operation performed upon this boy was somewhat similar to one which was suggested by Dr. Little, and has been employed several times by Mr. Davy—viz., excision of the cuboid bone. If, however, it be the object of the surgeon to restore at once a severe case of talipes to the normal position, it is necessary to cut away large portions of the adjacent bones, as well as to remove the cuboid. This mode of procedure appears to have been once adopted by Mr. Solly, but without a very satisfactory result. The operation must be much simpler when the foot is rendered bloodless by Esmarch's bandage. The careful use of antiseptic precaution diminishes very much the danger which would otherwise arise from the opening of so many joints and synovial sheaths. Finally, the splint which was afterwards used renders the subsequent moulding of the foot into its proper relations a very easy matter. It is an operation which may be adopted with great advantage where other methods of treatment have failed, or when the patient desires to avoid the long and painful treatment and the costly apparatus which are required for the cure of the severe examples of this deformity.—Mr. ADAMS, whilst congratulating the author upon the favourable issue of this case, pointed out that, as a general law, the operation of excision for cases of relapsed varus was totally unnecessary; since all such cases, no matter of how long standing, could be cured by mechanical means, aided by tenotomy, the tendo Achillis being the last tendon to be divided, on account of its contraction helping to remove the deformity. The argument that excision shortens time and avoids expensive apparatus was a doubtful one, as opposed to the risk incurred in opening joints and synovial cavities.—Mr. BRODHURST could not understand how, in a boy of twelve, it was necessary to remove bone from the foot to remove a deformity which could be remedied even in the adult without such means. He remembered that in Mr. Solly's case some deformity remained twelve months after the operation.—Mr. DAVY had seen so many patients treated by mechanical means, whose last state was worse than the first, that he had resolved to repeat Mr. Solly's operation (slightly modified)—namely, to excise the cuboid in cases of talipes. He had done this in three cases, and in the third had removed not only the cuboid, but a wedge-shaped piece of the tarsus.—Mr. CARR JACKSON thought it discreditable that so many cases of varus should be prevalent, and believed it to be due to the fact that the mechanical treatment was not continued for a long enough time. The treatment of a genuine case of talipes equino-varus lasts from infancy to adult life.—Mr. DAVIES-COLLEY, in reply, said that in his own account of his case Mr. Solly says that the operation was quite successful. There were a large number of successful cases among the poorer classes in whom, after operation, it was impossible to maintain the foot in position, and therefore relapses occurred. The dangers due to opening synovial cavities were diminished by antiseptic precautions. His operation was not simply excision of the cuboid, but of the whole tarsus.

The Society then adjourned.

Reviews and Notices of Books.

The Geographical Distribution of Animals, with a Study of the Relations of Living and Extinct Faunas, as elucidating the Past Changes of the Earth's Surface. By ALFRED RUSSEL WALLACE. With Maps and Illustrations. In 2 vols. Macmillan and Co. 1876.

IT is well known that to Mr. Wallace a share of the credit is due of establishing that important theory which has been named after Mr. Darwin, and which has played so great a part in the literary history of the last seventeen years. In the work before us Mr. Wallace has added another laurel to his crown, for though he has himself in previous works, and though some recent writers, and notably Mr. Darwin himself, in his "Origin of Species," have advanced some general views on the geographical distribution of species, yet there has been no attempt to give a collective account of the fauna of the various regions of the globe, nor to connect the present distribution of animal life in each part with that which has characterised it in past periods of the world's history. This Mr. Wallace has, perhaps as perfectly as it is possible at present to do, accomplished in the work before us, which exhibits in every page the results of immense reading and research, as well as critical ability, in drawing conclusions from the mass of facts he has accumulated.

Mr. Wallace adopts Mr. Sclater's divisions of the world, which our readers may perhaps be interested to know. They are—(1) The Palæarctic region, which includes all temperate Europe and Asia, from Iceland to Behring's Straits and from the Azores to Japan. This extensive region is subdivided into the European, the Mediterranean, the Siberian, and the Manchurian sub-region. (2) The Ethiopian region, subdivided into the East, West, and South African sub-regions, and a sub-region comprising Madagascar and the adjacent islands. (3) The Oriental region, including all India and China from the limits of the Palæarctic region, the Malay peninsula, Java and Baly, Borneo and the Philippine Islands and Formosa. It is divided into the Indian, Ceylonese, Indo-Chinese, and Indo-Malayan sub-regions. (4) The Australian region, divided into the Austro-Malayan (including the islands from Celebes and Lombok on the west to the Solomon Islands on the east), the Australian, the Polynesian, and the New Zealand sub-regions. (5) The Neotropical region, comprising all South America, and divided into the Brazilian, the Chilian, Mexican, and Antillian sub-regions. And, lastly, (6) The Nearctic region, comprising all temperate North America and Greenland, divided into the Californian, Rocky Mountain, Alleghanian, and Canadian sub-regions. There are thus six regions and twenty-four sub-regions.

The Palæarctic region has 136 families of vertebrata and 3 peculiar families, the Ethiopian 174 and 22, the Oriental 164 and 12, the Australian 141 and 30, the Neotropical 168 and 44, and the Nearctic 122 and 12.

In order that the geographical distribution of animals may be followed, it is requisite that some principles of zoological classification should be recognised, and not the least valuable part of Mr. Wallace's work is the presentation of the results of recent inquiry in this direction to the eye of the reader in a tabulated and readily intelligible form.

Mr. Wallace commences the theoretical part of his treatise with a short account of the extinct mammals of the old and new world, a fitting introduction to the study of the distribution of the present fauna of the globe.

The Tertiary period is that which is of most interest to the modern zoologist; for the deposits of that period are characterised by containing the remains of numerous mammals the relations of which to the species now existing are of the most intimate kind, whilst the fossils of the secondary period are so archaic in form as to present little in common with those of our own time. The great size of many of the animals of the Tertiary period inhabiting the now temperate zone, as the mammoth, mastodon, megatherium, gigantic Irish elk, the sabre-toothed tiger, &c., is a remarkable circumstance. Their disappearance he attributes to the occurrence of the glacial period, when a cap of ice certainly several thousand feet, and perhaps some miles, in thickness covered the earth from the poles to the 40th degree of latitude. But the formation of such an immense mass of solidified water, it is calculated, would have depressed the sea level 2000 feet, a depression that would have greatly extended the limits of America, Australia, and other parts of the globe, where the animals, driven by the intense cold from the temperate regions, probably took refuge if capable of undergoing adaptation.

We have no space to take the several regions *seriatim*, but may cull a few facts from one—the neotropical region. This region, represented by South America, is characterised by the large number of peculiar family and generic types. It has eight families of Mammalia absolutely confined to it, and at least a hundred genera, amongst which the sloths, armadilloes, anteaters, and guinea-pigs, the large group of platyrhine monkeys, the coatis and blood-sucking bats, are conspicuous. On the other hand, with two exceptions, the Insectivora are wholly wanting. It has no oxen or sheep, and, indeed, no form of Ruminant except deer and llamas; neither do its vast forests and grassy plains support a single form of non-ruminant ungulate except the tapir and peccary. Amongst its birds, the most remarkable are the toucans, curassows, tinamous, and humming-birds; in regard to which Mr. Wallace observes—"How vast must have been the time required to develop these beautiful and highly-specialised forms out of some ancestral swift-like type; how complete and long-continued the isolation of their birth-place, to have allowed of their modification and adaptation to such divergent climatic conditions, yet never to have permitted them to establish themselves in the other continents. No naturalist can study this single family of birds without being profoundly impressed with the vast antiquity of the South American continent, its long isolation from the rest of the land surface of the globe, and the persistence through countless ages of all the conditions requisite for the development and increase of varied forms of animal life." The reptiles, amphibia, fishes, and invertebrata generally of this region are not less remarkable.

The phenomenon of migration, which, though most familiarly known as occurring in birds, has also been observed in fish and several mammals, is very interestingly explained by Mr. Wallace. After pointing out that our temperate climate leads to the descent during winter of birds from the north, and the ascent from the south of others during the summer—the northern visitors being the fieldfare, the redwing, the snow-bunting, the turnstone, and numerous ducks and waders; and the southern ones being the cuckoo, swift, swallow, and numerous warblers,—Mr. Wallace observes that of the latter, or southern migrating birds, all cross the Mediterranean in three places only, either from the south of Spain in the neighbourhood of Gibraltar, from Sicily over Malta, or to the east by Greece and Cyprus. Now it is a curious fact that the Mediterranean, some parts of which are of profound depth, 12,000 feet or more, is remarkably shallow (1000 to 1500 feet) at these points, and he considers that the instinct of migration has arisen from the habit of wandering in search of food common to all animals, but greatly exaggerated in the case of birds by their powers of flight, and by the necessity for procuring a large amount of soft insect food for their unfledged young. Hence the conclusion easily follows that the migration of such birds as the swallow dates back from at least the period when there was continuous land along the route passed over; and it is a suggestive fact that this land connexion is known to have existed in recent geological times. Britain was connected with the continent, during and probably before the glacial epoch, and Gibraltar as well as Sicily and Malta, were also recently united with Africa, as is proved by the fossil remains of elephants in their caverns. The submersion of the two above-named tracts of land would be a slow process, and from year to year the change might be hardly perceptible. It is easy to see how the migration that had once taken place over continuous land would be kept up, first over lagoons and marshes, then over a narrow channel, and subsequently over a considerable sea, no one generation of birds ever perceiving any difference in the route.

Mr. Wallace in many places adduces facts and arguments that afford strong support to the Darwinian theory. To give one instance only, but a very interesting one: It is one of the doctrines of Darwin that the beautiful hues of the more conspicuous flowers of the globe have resulted from the attraction their remote ancestors have proved to insects by which they were fertilised, the more gaily coloured being just those that produced progeny. Now the New Zealand region is remarkably deficient in insect life, and in strong confirmation of Mr. Darwin's theory is the fact that the flora is almost as strikingly deficient in gaily coloured blossoms. With some exceptions the flowers are inconspicuous and often green, offering a singular contrast to the general brilliancy of Australian flowers, combined with the abundance and variety of its insect life. It further occurred to Mr. Wallace that if this reasoning were correct, New Zealand plants ought to be also deficient in scented flowers, because it is a part of the same theory that the odours of flowers have, like their colours, been developed to attract the insects required to aid in their fertilisation. He therefore at once applied to Dr. Hooker, as the highest authority on New Zealand botany, simply asking whether there was any such observed deficiency. His reply was: "New Zealand plants are remarkably scentless, both in regard to scented flowers of leaves with immersed glands containing essential oils, and of glandular hairs."

The second volume of Mr. Wallace's work is the converse of the first. Whilst the first is occupied with an account of the several regions of the world, and enumerates the animals that are found in them, the second takes the several classes and families of the animal kingdom, and states the regions in which they are found. The former is the zoological geography of the world, the latter the geographical zoology. If it be desired to know what animals are found in a given region, the first volume must be referred to, but if it be wished to ascertain what region a particular animal inhabits the second must be examined.

The book is illustrated by admirable coloured maps of the different zoological regions, as well as by a series of plates representing the peculiar features of the fauna of each district. We may add that the index is singularly complete.

Précis d'Opérations de Chirurgie. Par le Dr. J. CHAUVEL, Médecin-Major, Professeur Agrégé de Médecine Opératoire à l'Ecole du Val-de-Grâce. Paris: J. B. Baillière et Fils. 1877.

THIS abstract of surgical operations is a very valuable book, and differs in many respects from any English work. It is not a mere manual of minor surgery, nor does it come into the same category as the works on Practical Surgery written by such masters of the art as Liston and Fergusson. Almost every operation that is generally performed is described by the author, who intentionally omits only those which have become quite obsolete. He, however, expresses no opinion on their relative value, and the special use of the work is therefore as a guide in a course of operative surgery on the dead subject, and as a handy-book of reference for the various methods of performing any requisite operation. Each chapter begins with a short account of the chief anatomical considerations, and then the operation is divided into stages, each of which is succinctly and lucidly described. A synopsis of the variations introduced by different surgeons in the course of the proceeding is always added, British and German authorities, as well as French, being freely referred to. For example, in the chapter dealing with ligature of the third part of the subclavian artery, the line of incision employed has been transverse, vertical, oblique, curved, and compound, and the names of the surgeons who have recommended each variety are appended.

The sections on ligature of arteries, amputations, resections, and operations on the male urinary organs, are very full. Teale's amputation, erroneously figured in one of our most recent and popular text-books, is amply and correctly described, and the same care and accuracy are displayed in the descriptions of the more special operations, as those on the eye &c. We miss any notice of some modern English operations, as the method of closing fissures in the hard palate revived by Fergusson, &c.; and we are surprised that no mention is made of ovariotomy—an operation surely of much greater importance than Labbé's procedure for removing foreign bodies from the stomach.

In spite of a few deficiencies like these, a work extending over nearly 700 pages, clearly printed, and remarkably well illustrated with 280 figures of operations and instruments from drawings made by a colleague (Dr. Charvot) is such a marvel of cheapness at the price of six francs that it only wants to be widely known to secure a large circle of surgical readers.

OUR LIBRARY TABLE.

In Manbury City. A Novel. By DAVID SIME. 3 vols. London: Tinsley Brothers.—This novel depicts the habits, customs, and manners of society as it exists in a Scotch university town, Manbury being no other than Glasgow city. Many of the scenes and characters are evidently drawn from real life. Professor Bismuth, the consulting physician, who is strong on "functional derangement of lungs, without there being, you know, actual disease—no infiltration, in fact," is a capital sketch, the little weaknesses and vanities of such eminent personages being set forth with kindly humour. The hypocrite Lushington, an ex-grocer's assistant, who, after showing great powers of prayer during some revival meetings at his native town, is sent to Manbury to be trained for a medical missionary, is a bitter satire on that impulsive zeal which, by mistaking loud profession for true sincerity and earnestness, sends so many unworthy labourers into the missionary field. There is a graphic description of a death in a fever hospital. It is a relief to find the medical details, though not too fully given, are accurate. Mr. Sime has done justice to the medical students. Sedgemour, the hero, is a fine manly fellow, studious in his classes, fond of his home, sociable with his companions, and capable of taking part in rational and intellectual conversation—a distinct advance on the drunken and brainless sots that writers of fiction have, since the creation of Benjamin Allen and Bob Sawyer, delighted to represent as the alumni of medicine. The interest of the story is well maintained throughout, and is utterly devoid of sensationalism and the interpolation of improbable incidents. It is a book calculated to amuse and interest the leisure hours of many members of our profession.

The Monthly Microscopical Journal. Oct. 1, 1876. No. 94. Edited by HENRY LAWSON. Hardwicke and Bogue.—This number contains (1) a free translation by Mr. Slack of papers on Spontaneous Generation by Dr. Bastian and M. Pasteur, which have lately appeared in the *Comptes Rendus*: the former writer obtaining bacteria from urine that had been boiled and exactly neutralised by potash; the latter maintaining that any bacteria that then develop are due to the presence of germs which have resisted the influence of the heat, and that such urine may always be made sterile by simply acidifying it. (2) The Markings of Frustula Saxonica, by Samuel Wells. (3) Observations upon Mr. William A. Roger's paper on a Possible Explanation of the Method employed by Nobert in Ruling his Test Plates, by W. Webb. In this paper a statement is made to the effect that Mr. Frank Crisp is in possession of a diamond engraving of the Lord's Prayer, in which the letters are smaller than the two hundred and ten millionth part of a square inch, at which size over fifty-nine Bibles would be required to cover an inch. (4) On the Present Limits of Vision, by Dr. Royston Pigott. (5) On the Structure and Development of Connective Substances, by Thomas E. Slatterthwaite, M.D.

The Graduated Course of Translation from English into French. Part II., Senior Course. Edited by Professor CH. CASSAL, LL.D., and Professor KARCHER, LL.B. London: Longmans.—The design of the authors of this work is to assist senior students of the French language more readily to surmount the difficulties, idiomatic or other, which are met with in translating English into that tongue. With this view the English words or phrases which more especially offer such difficulties are printed in black type, and in a vocabulary at the end of the volume is supplied their proper translation. The book is calculated to be extremely useful to both learners and teachers of the French language.

REPORT
OF
The Lancet Sanitary Commission
ON
ENGLISH WATERING-PLACES.

LOWESTOFT.

POSSESSING a magnificent extent of sands, a dry bracing climate, a picturesque neighbourhood, with drives and walks through the most varied scenery, now across commons or "denes" yellow during the summer months with gorse, or along roads shaded with trees, among which the oak, the chesnut, and holly seem to flourish with particular luxuriance; or across flats intersected with broad dykes, up which barges with their brown sails lazily creep on their way to Beccles, Norwich, and other inland ports; and when we add to these natural attractions that the general arrangements of the town are well-ordered, and the comforts of the visitors are scrupulously attended to—that lodging-houses, unlike the generality of seaside lodging-houses, exhibit a considerable degree of taste and even elegance in their construction, it is no wonder that Lowestoft is held in such high estimation, and can boast a numerous *clientèle* of fashionable visitors. For some time past, however, complaints have reached us that all was not quite right with regard to the sanitary arrangements of the town, and evidence has been forwarded us from different quarters respecting the contraction of certain zymotic diseases by visitors during their residence at that place. These reports, if unfounded, are sure to affect most injuriously the reputation and prosperity of the town. But if, on the other hand, the statements are founded on fact, the sanitary authority are guilty of the most suicidal policy in ignoring the complaints that have been already addressed to them, and in neglecting to remedy the evils to which their notice has been drawn.

Lowestoft, taking the total mortality per 1000, ranks high in the first division as regards salubrity among English watering-places, the total mortality per 1000 for the spring quarters of the last three years averaging only 14·7. Taking, however, the zymotic death-rate for the last three years, we find it considerably higher than it should be, especially when we take into consideration the lowness of the death-rate from other causes. Thus for the spring quarters of the years 1874, 1875, and 1876 the death-rate per 1000 from zymotic diseases has been, according to the Registrar-

General's return, 1·7, 1·7, and 1·4 respectively.* Taking, again, the mortality in the autumn quarters of 1874 and 1875 (*vide* THE LANCET, Aug. 26th, p. 294,) from diarrhœa, we find it stands ninth on the list out of twelve of the principal watering-places of England; Brighton, Margate, and Yarmouth alone having a higher rate. It has been urged that the mortality from diarrhœa is principally due to bad feeding on the part of the poorer population; but we would ask—are the children of Lowestoft worse fed or cared for than nine other watering-places that have a lower rate? Take Dover, for instance, having a port as large, as if not larger than, Lowestoft, and having the additional disadvantage of being a garrison town, yet the death-rate from zymotic disease for three spring quarters averaged 1·1 per 1000 at Dover, as compared with 1·6 at Lowestoft; whilst the rate of mortality from diarrhœa for the autumn quarters of 1874 and 1875 at Dover was exactly half that returned by Lowestoft! Those acquainted with the two towns will be surprised at this statement. Facts like these inevitably lead to one conclusion—that defects more or less serious exist in some of the sanitary arrangements of the town. What the defects are it has been the duty of our Commission to investigate and relate.

Lowestoft consists of an old and new town, which respectively lie north and south of the harbour. The new or south town is the fashionable quarter, and here are situated the principal lodging-houses. This part of the town lies almost on a dead level, and a few years ago was nothing but a barren waste, till Sir Morton Peto commenced building operations. Now the sea front extends for nearly a mile south of the harbour, and it boasts of the finest houses in the town. Old Lowestoft is situate on the north side of the harbour, and consists mainly of one long street, ascending gradually to an elevation of about 130 feet above high water mark. This part of the town may be said to terminate at the High lighthouse, which is about half a mile distant from Ness point, the most easterly situation in England. Both the south and north town are furnished by a company with a constant supply of excellent water. The proprietor of the Royal Hotel, with a spirit which we should like to see imitated by hotel proprietors generally, recently (July, 1876) submitted this water to Dr. Tidy for analysis, and the result proved most satisfactory, as the appended serves to show:—

Analysis of Water supplied by the Lowestoft Water Works. Sample drawn from the tap of the Royal Hotel.

	Imp. gallon.
Actual and saline ammonia	0·004
Ammonia from organic matter	0·008
Nitrogen as nitrates	0·225
Oxygen required to oxidise organic matter	0·085
Lime	3·772
Magnesia	0·840
Alkalies	2·817
Chlorine	3·250
Sulphuric anhydride ...	1·592
Nitric acid	1·017
Carbonic acid	2·590
Silica, alumina, &c.	0·400
Total solid matter per gallon	16·4
Degrees of total hardness	8·0°
„ permanent hardness ...	1·6°

Unfortunately, however, many of the inhabitants do not avail themselves of this excellent supply, but continue to draw their water from private wells, many of which are undoubtedly contaminated with sewage. We have been favoured with an analysis of water drawn from one of these private wells made last February by the late Dr. Letheby. For the sake of comparison, we briefly quote the particulars:

	Imp. gallon.
Actual or saline ammonia	0·004
Ammonia from organic matter	0·009
Nitrogen as nitrates	3·405
Chlorides	43·89
Sulphates	26·49
Total solids	94·06

The presence of such large quantities of nitrates, chlorides, and sulphates, shows incontestably that the water is "so polluted with drainage-matter from a privy, cesspool, or stable, as to be quite unfit for domestic use." That wells so dangerously polluted have been, and still are, in use is in itself sufficient explanation of the high diarrhœal death-rate of the town. And we have little doubt that some of the cases of typhoid, of which we have received detailed accounts, are also attributable to the same cause. The sanitary authority ought, on behalf of the visitors, if on no other consideration, to close all wells that show the slightest trace of pollution.

Lowestoft is provided with three main sewers, two for the old town and one for the new. The chief sewer of the old town takes the sewage from the upper part of the town, from whence it descends with a good fall to the Ness point, and there discharges into the sea. The flow and ebb of the tide is south and north, so that during the ebb the sewage is carried well out to sea. No sewage certainly is deposited on the foreshore. This sewer appears to be sufficiently well-ventilated, and we received no complaints at all respecting the drainage of this part of the town. The other sewer of the old town drains a comparatively small area of houses in the neighbourhood of the station; it discharges into the north side of the harbour about forty feet from the swing bridge. The outlet is uncovered at low water, and is unprotected by a flap-valve, so that during high water the tide passes up it. Complaints were made to us that during very high tides the cellars of houses connected with this sewer are often flooded. Independently of this inconvenience, there must be daily, during the flow of the tide, a great accumulation of sewage in the sewer, and a backward rush of sewer-gas towards the houses. No provision as yet seems to have been made to relieve the dangerous pressure of gas in this sewer. A flap-valve ought to be placed at the outlet of this sewer, to prevent the passage of the tide up it, whilst a ventilating-shaft ought to be placed at the two extremities of the sewer, so as to allow the free escape of the pent-up gases during the time the outlet-valve is closed at the flow of the tide.

The sewage of the new or south town, which is the fashionable quarter and most frequented by visitors, is received into a sewer which discharges into the harbour on the south side, about forty feet from the swing bridge. The outlet is below low-water mark. The complaints we have received of bad smells and outbreaks of zymotic disease at Lowestoft have all been from visitors residing in houses connected with this sewer. And, on looking over the registrar's returns with the medical officer of health, we noticed that the deaths from typhoid fever reported occurred almost exclusively in this quarter. Nor is this to be wondered at when we consider the condition this sewer must be in during the crowded season of the year. The main sewer was originally constructed for the drainage of a few houses of the new suburb, which, since its construction, has enormously increased. The sewer, judging from the outlet, is about two feet and a half in diameter—a capacity, even with a greater fall, utterly insufficient to meet the requirements of the now numerous houses that drain into it. But when we consider that this sewer has hardly any fall, that the outlet being always under water the escape of sewage must be slow at all times, and actually stopped during the flow of the tide; whilst the ventilation of the sewer is scarcely worth mentioning, and the arrangements for flushing *nil*, we have a series of conditions all tending to cause accumulation of sewage in the sewers, as well as dangerous regurgitations of sewer gases into the houses themselves. The condition of this sewer during the season, when the houses are crowded with visitors, must be something dreadful. Nor do the owners of house property seem to take sufficient precautions to guard themselves against this danger. Ventilation of soil-pipes or the house-drains, with one or two exceptions of private houses, appears to be a thing unknown

* It is only right to state that considerable discrepancy exists between the returns of the medical officer of health and those of the Registrar-General. The medical officer of health's returns apply only to his sanitary district, the town and port of Lowestoft; whilst the Registrar-General's returns include certain rural parishes lying outside the urban and port sanitary area. As a similar arrangement of registration districts exists at most of the watering-places, for purposes of comparison we always quote from tables of the Registrar-General. But as the comparison in the present instance has been thought unfair to Lowestoft, we wish to state that the medical officers' returns of the death-rate from zymotic disease and diarrhœa are rather higher than those of the Registrar-General, but the deaths from the class "fever" are less.

at Lowestoft, whilst the disconnexion of the waste and rain-water pipes seems to be rarely attempted. The danger from the latter is increased at Lowestoft by the design of the houses. The first two floors have usually bay windows; above the drawing-room bay is a bed-room window; the drippings from the roof fall on the slates of the roof of the bay, and are collected by a rain-water pipe which opens just below the window of the sleeping-room. Of course it is stated that these rain-water pipes are trapped before their junction with the sewer, but how long does the trap remain charged during hot and dry seasons? Many of the lodging-houses have upstair sinks for the ready disposal of slops, &c. The waste from these passes either directly into the soil-pipe, closet (the most usual arrangement), or into the house-drain. We have distinct evidence that in many cases the trapping of these wastes has been omitted, or is else utterly insufficient, so that sewer-gas is not an infrequent visitor of the upstairs rooms. Hence the source of the malaise, the feverish colds, sore-throats, of which, as before stated, we have received so many complaints. When we consider the price visitors to the seaside have to pay for the privilege of obtaining fresh air, it is really too bad to adulterate that expensive article with foul sewer emanations, an adulteration that a little trouble and slight expense would altogether obviate. The present sanitary condition of the south side of Lowestoft is a matter greatly to be deplored, the more so as many cases of "avoidable" illness have been occasioned by it. Fortunately for the owners of property in the south town the means of remedy can be speedily applied, and that without incurring great expense.

1. The flushing and ventilation of the sewers must be greatly increased. A large tank should be constructed by Kirtley-hill, capable of holding at least 20,000 gallons, which during the season should be discharged once daily, at the ebb of the tide, through the sewers. The number of street ventilators should be greatly increased; and at least three ventilating shafts, like those that have been recently erected at Yarmouth, should be placed along the line of the main sewer.

2. Sanitary supervision of the hotels and lodging-houses should be instituted. It is stated that this could not, under present conditions, be carried out, the sanitary authority having no power whatever to enforce the adoption of protective measures in houses. The difficulty, however, is more imaginary than real. If the sanitary authority were to grant a certificate, signed by their medical officer of health and inspector of nuisances, stating that, after careful examination, the sanitary arrangements of a house were found to be in perfect working order, and that all precautions were taken to prevent the entrance of sewer gases, we believe that such a certificate would be eagerly sought after by the lodging-house keepers, especially when the fact became known to visitors, who would naturally prefer the certified to the uncertified houses. The sanitary authority of Lowestoft is fortunate in possessing an able and intelligent officer in Mr. Rayment, the inspector of nuisances; and a house-to-house inspection carried on by him during the ensuing dull season would, we are sure, bear ample fruit next year in the manifest improvement of the lodging-houses.

In conclusion, we would again urge upon the sanitary authority the necessity of immediately undertaking these improvements in the new town. The natural salubrity of Lowestoft is proved by an exceptionally low death-rate; yet, in spite of this salubrity, zymotic disease is as high as, and even higher than, in many less favoured towns. If the sanitary authority will carefully examine the death returns for the last two years, they will find that the disproportion between the total death-rate and the zymotic and diarrhœa mortality is caused almost entirely by the high rate from the two latter causes which takes place in Kirtley, or the district of the new town. We have no hesitation in saying that the mortality from zymotic disease in Kirtley is excessively, even alarmingly, high when compared with the other quarters of Lowestoft, and can only be accounted for by the defective sanitary conditions we have pointed out. It is in the new town where the visitors chiefly congregate, and, coming oftentimes as invalids, and unaccustomed to the influence of sewer-gas, they are more liable to be injuriously affected by it. The complaints from visitors have already been extremely numerous, and many of the statements made to us have shown that some of the infectious diseases contracted at Lowestoft have had a fatal termination. On the present occasion we have foreborne making public the details of these cases. But if the sanitary authority do not speedily take steps to protect the public against the dangers that have been pointed out, not only by ourselves, but by others, we shall then consider it our duty to make these facts known, so that invalids and delicate persons may not be exposed to influences likely to be injurious to them.

THE SMALL-POX OUTBREAK IN ISLINGTON.

BY W. H. W. WILKINSON, L.R.C.P. ED., &c.

THE outbreak of small-pox in the parish of St. Mary, Islington, undoubtedly commenced with a case occurring at 107, Pembroke-street — a street situate in the South-west ward of the parish. The precise date and circumstances attending the attack are apparently doubtful, for I can get no information which can be relied on; it must be sufficient for the present to know that during the latter half of August and commencement of September the house was not free from small-pox infection. On Sept. 5th, however, a case occurred at No. 111, two doors away from the house of the first attack, the subject of this case being an unvaccinated baby eight months old. The mother had been in and out of the infected house, No. 107, the ground floor of which contains a shop, during the preceding fortnight. It is thus possible she may have carried the infection with her from which her baby died on the seventh day of the disease. On Sept. 9th a case took place in a house situated in a small open street (Cardale-street), almost immediately in the rear of No. 111. The subject of the attack was a young girl (vaccinated), who before she was taken ill used to fetch the mangling from the infected house, No. 107. She was sent to the hospital. On the same day (Sept. 9th) a case occurred in a house almost directly in a line with the two former. This house is a very wretched habitation, situated directly in the rear of the house in Cardale-street, in East-street, Stroud's-vale. On Sept. 6th and 7th the subject of this attack, a young man (unvaccinated), was working for a day and a half for a coal-dealer in the neighbourhood, and travelled through various streets disposing of his coals *en route*. Prior to the 6th he had been out of work for some time, but kept in the neighbourhood. On Sept. 10th I was called to 64, Freeling-street, to see a young man (vaccinated) who was suffering from the disease. This house is exactly opposite 107, Pembroke-street. The man was removed to the hospital. On the same date a young girl (vaccinated) came out with small-pox eruption. She resided in a house about thirty yards from the one last described. I could obtain no further history from her than that she went to a cheesemonger's and dairyman's about ten days previous to her attack. She was removed to the hospital, and while there a young man who was employed at the cheesemonger's was admitted as a patient.

I have prepared the accompanying tabulated form of the cases which have occurred in my own practice.

Case 6.—Mangling is done at this house, but no direct evidence of contagion is given. That the children were playing about the streets is all the information obtainable. It is important to notice the dates of cases Nos. 6, 48, and 49.

Case 7.—On August 27th, this man went to Lambeth and stayed a few hours. He was then informed of some cases of small-pox, but no one in the house he visited had the disease or, as far as can be traced, were exposed to its influence. On September 3rd he made a second visit to Lambeth, on the 8th he fell sick, and on the 11th the small-pox appeared. This man was employed as a coal-whipper on the Great Northern Railway, and since he was attacked others have fallen sick.

Case 8.—This case is another occurring on the 11th, and the father of the child is employed in the same occupation as the subject of Case 7, to which case reference should be

TABLE OF CASES WHICH HAVE OCCURRED IN MR. WILKINSON'S PRACTICE FROM SEPT. 5TH TO OCT. 7TH.

Date.	Number in rotation.	Sex.	Age.	Address.	Vaccination.	Number of scars.	——	——
1876.								
September 5th.	1	M.	8 ms.	111, Pembroke-street.	No.	...	Confluent.	Died on 7th day of disease.
" 9th.	2	F.	12	12, Cardale-street.	Yes.	3	Mild.	Hospital.
" 9th.	3	M.	20	Norris Cottage, Stroud's-vale.	No.	...	Confluent.	Hospital.
" 10th.	4	M.	22	64, Freeling-street.	Yes.	3	Mild.	Hospital.
" 10th.	5	F.	19	24, Clayton-street.	Yes.	2	Mild.	Hospital.
" 11th.	6	M.	12	106, Bemerton-street.	Yes.	1	Slight.	Got well at home.
" 11th.	7	M.	33	11, Sydney-street.	No.	...	Confluent.	Hospital; died.
" 11th.	8	M.	5½	117, Bemerton-street.	No.	...	Confluent.	Died at home.
" 12th.	9	M.	21	79, Pembroke-street.	Yes.	3	Mild.	Hospital.
" 13th.	10	F.	34	23, Gifford-street.	Yes.	3	Mild (pregnant).	Recovered at home.
" 13th.	11	F.	4	30, Clayton-street.	Yes.	5	Mild.	Recovered at home.
" 14th.	12	F.	2	120, Pembroke-street.	Yes.	6	Mild.	Recovered at home.
" 16th.	13	M.	11	110, Bemerton-street.	Yes.	1	Mixed (epistaxis).	Recovered at home.
" 17th.	14	M.	21	49, Pembroke-street.	Yes.	2	Mild.	Hospital.
" 18th.	15	F.	3	31, Gifford-street.	No.	...	.....	Hospital.
" 18th.	16	M.	8	67, Freeling-street.	Yes.	6	Mild.	Recovered at home.
" 18th.	17	F.	5	33, Lyon-street.	Yes.	5	Mild.	Recovered at home.
" 18th.	18	F.	9	67, Freeling-street.	Yes.	1	Mild.	Recovered at home.
" 19th.	19	F.	10	53, Gifford-street.	No.	...	.....	Hospital.
" 19th.	20	F.	8	56, Freeling-street.	Yes.	2	Mild.	Recovered at home.
" 20th.	21	F.	5	119, Bemerton-street.	No.	...	Confluent.	Hospital.
" 21st.	22	F.	30	39, Richmond-road.	No.	...	Confluent.	Died at home.
" 21st.	23	M.	15	20, Freeling-street.	No.	...	.....	Hospital.
" 21st.	24	F.	25	226, Caledonian-road.	Yes.	3	Mild.	Hospital.
" 21st.	25	M.	7	67, Freeling-street.	Yes.	4	Mild.	Recovered at home.
" 21st.	26	M.	5	171, Bemerton-street.	Yes.	3	Mild.	Recovered at home.
" 22nd.	27	M.	3	137, Bemerton-street.	No.	...	.....	Hospital; died.
" 22nd.	28	M.	12	69, Freeling-street.	Yes.	...	Mild.	Recovered at home.
" 22nd.	29	F.	5	5, Stroud's-vale.	Yes.	3	Severe.	Recovered at home.
" 23rd.	30	F.	33	33, Clayton-street.	Yes.	2	Mild.	Hospital.
" 23rd.	31	M.	11	11, Lyon-street.	Yes.	5	Slight.	Hospital.
" 23rd.	32	M.	5	111, Pembroke-street.	Yes.	3	Slight.	Recovered at home.
" 23rd.	33	F.	10	38, Freeling-street.	Yes.	2	Mild.	Recovered at home.
" 23rd.	34	M.	13	127, Bemerton-street.	Yes.	3	Mild.	Recovered at home.
" 23rd.	35	M.	5	67, Freeling-street.	Yes.	3	Mild.	Recovered at home.
" 23rd.	36	F.	25	5, Gifford-street.	Yes.	3	Mild.	Recovered at home.
" 23rd.	37	F.	23	70, Gifford-street.	Yes.	4	Mild.	Recovered at home.
" 23rd.	38	M.	42	126, Pembroke-street.	Yes.	2	Mild.	Hospital.
" 23rd.	39	F.	14	59, Offord-road.	Yes.	3	Mild.	Hospital.
" 23rd.	40	M.	6	67, Freeling-street.	Yes.	5	Mild.	Recovered at home.
" 23rd.	41	M.	4	67, Freeling-street.	Yes.	6	Mild.	Recovered at home.
" 24th.	42	M.	27	Great Northern Hospital.	No.	...	Confluent.	Hospital.
" 24th.	43	M.	11	Great Northern Hospital.	Yes.	2	Mild.	Hospital.
" 25th.	44	F.	5	145, Bemerton-street.	No.	...	.....	Hospital.
" 25th.	45	M.	17	8, Caledonian-street.	Yes.	2	Mild.	Hospital.
" 25th.	46	F.	7	27, Storey-street.	Yes.	6	Mild.	Recovered at home.
" 25th.	47	M.	4	29, Gifford-street.	Yes.	...	Slight.	Recovered at home.
" 26th.	48	M.	4	116, Bemerton-street.	Yes.	4	Slight.	Recovered at home.
" 26th.	49	F.	6	116, Bemerton-street.	Yes.	5	Slight.	Recovered at home.
" 26th.	50	M.	17	139, Bemerton-street.	Yes.	3	Mild.	Hospital.
" 26th.	51	F.	11	2, Bolton-terrace, Stroud's-vale.	Yes.	2	Severe.	Hospital.
" 26th.	52	M.	27	135, Bemerton-street.	No.	...	Confluent.	Hospital.
" 26th.	53	M.	8	55, Freeling-street.	Yes.	1	Slight.	Hospital.
" 26th.	54	F.	30	117, Bemerton-street.	Yes.	3	Slight.	Hospital.
" 27th.	55	F.	18	112, Bemerton-street.	Yes.	1	Slight.	Hospital.
" 27th.	56	F.	14	135, Bemerton-street.	Yes.	1	Slight.	Hospital.
" 26th.	57	M.	11	27, Cardale-street.	Yes.	3	Mild.	Recovered at home.
" 27th.	58	F.	28	38, Clayton-street.	Yes.	1	Mild.	Recovered at home.
" 29th.	59	F.	25	41, Clayton-street.	Yes.	3	Mild.	Recovered at home.
" 29th.	60	F.	2	139, Bemerton-street.	No.	...	Severe.	Hospital.
" 30th.	61	F.	13	33, Lyon-street.	Yes.	...	Slight.	Hospital.
" 30th.	62	F.	10	33, Lyon-street.	Yes.	...	Slight.	Hospital.
" 30th.	63	M.	36	23, Gifford-street.	No.	...	.....	Hospital.
October 1st.	64	M.	10	33, Lyon-street.	Yes.	...	Slight.	Hospital.
" 2nd.	65	F.	10	119, Bemerton-street.	Yes.	3	Slight.	Under treatment.
" 2nd.	66	M.	32	228, Caledonian-road.	Yes.	2	Mild.	Hospital.
" 3rd.	67	M.	14	33, Lyon-street.	Yes.	3	Slight.	Hospital.
" 4th.	68	M.	26	62, Freeling-street.	Yes.	4	Severe.	Hospital.
" 4th.	69	F.	12	32, Havelock-street.	Yes.	1	Slight.	Under treatment at home.
" 5th.	70	M.	7	27, Cardale-street.	Yes.	...	Slight.	Under treatment at home.
" 6th.	71	M.	10	7, Pembroke-street.	Yes.	3	.....	Hospital.
" 6th.	72	M.	7	34, Lyon-street.	No.	...	.....	Hospital.
" 6th.	73	M.	14	23, Gifford-street.	No.	...	Severe.	Hospital.
" 6th.	74	F.	33	63, Gifford-street.	Yes.	1	Slight.*	Under treatment.
" 7th.	75	M.	48	61, Freeling-street.	Yes.	3	Delirious on fourth day; slight erup.	Hospital.

* Premature confinement at seventh month; female child, survived thirty-two hours; no loss of blood.

The analysis of these cases gives the following result:—

—	VACCINATED.					UNVACCINATED.					
	Under 7 years.	7 years to 14 years.	14 years to 21 years.	21 years to 50 years.	Total.	Under 7 years.	7 years to 14 years.	14 years to 21 years.	21 years to 50 years.	Total.	Grand total.
Males	9	11	6	5	31	4	1	2	3	10	41
Females ...	7	10	2	9	28	4	1	—	1	6	34
—	16	21	8	14	59	8	2	2	4	16	75

The largest number of cases occurred between the age of 7 and 14. This bears unfavourably upon the law relating to revaccination with regard to age.

P.S.—The fresh cases, of which no details are given, reported up to the 11th inst., bring up the total number to 87.

made as to dates, which will determine the date of infection in both cases. Refer to Case 54 as to dates.

Case 13.—The subject of this case carried linen from the house primarily affected to his own for the purpose of mangling.

Cases 42 and 43.—Both these cases were in the Great Northern Hospital, where I was requested to visit them on the 24th September. Case 43 was admitted from the Boy's Industrial Home, Copenhagen-street. Case 42 was, I understand, engaged in the coal trade. Both these cases were dispatched to the hospital, and I at once revaccinated all the patients and staff in the hospital who were willing. The friends of the in-patients had notice to remove them as speedily as possible, and to bring with them a fresh suit of clothes for each patient to go away in. All patients who were deemed able took a warm bath prior to leaving. I have heard of no case of small-pox occurring in the hospital since, or among the patients who left it.

Cases 61 and 62.—Reference should be made to Case 17.

Case 74.—Child removed September 20th.

I will preface a few remarks I have to make on the subject of vaccination with the assertion that I have not yet seen a case of small-pox occurring in a subject who has been twice vaccinated with success on each occasion. Revaccination should be urged most strongly in the presence of an epidemic of small-pox, and should be general in ordinary times at the age of seven. I think if revaccination were carried out at this age we should contribute materially to the decrease of small-pox. The number of scars resulting from infantile vaccination, their superficial areage, their depth of destruction of tissue, do not give satisfactory information as to the protective influence of vaccination from small-pox, or as to the effective revaccination in adolescence. As in variola the destructive operation on the skin may be fairly considered in relation to the bodily health of the individual, and to the particular formation of the skin, so in vaccination the destructive action must be considered; but in the one disease the poison is introduced locally into the skin with probable general disturbance of the system, while the other affects the entire system at first, producing its subsequent effects upon the skin and mucous membranes. As it is most desirable for a satisfactory consequence that probabilities should be eliminated, it is essential in all cases of vaccination that a marked systemic febrile disturbance should play its important part in truly working as a prophylactic, the independent fact of tissue-destruction being valueless. It is, however, frequent that in the introduction of vaccine into the skin of a subject who has been previously vaccinated, the vaccinia instead of proceeding through its several and complete stages, aborts early, having only produced an areolar inflammation. The same condition of affairs holds good if variolous matter be used instead of vaccine, (Jenner, Case 4). This does not, however, gainsay the fact that variola may not occur the second time in the same individual, for I have a patient whose history shows that she has been twice attacked by small-pox.

Crowded houses are a fertile source of illness; very seldom indeed is a crowded house free from ill-developed subjects in this crowded neighbourhood. It would, I take it, be both practical and beneficial to have every house registered, stating the number of persons that could reside in it without prejudice to their health; it is certainly not commonly decent for an entire family to occupy one room only, and should not be permitted. The kitchens and basements in the affected districts are used generally for living purposes; the windows are mostly below the level of the road, and are frequently blocked with paper, rags or any other convenient agent, thus materially limiting light and affording but a casual ventilation in the form of a blast. In my Report to the Board of Guardians of September 21st, I called attention to the fact, and it is one that evidently should be remedied under the present circumstances. When an infectious disease makes its appearance it is difficult to stamp it out, and, as the law of removal stands, it must for the most part simply exhaust itself.

The isolation of the patient is of paramount importance. It is at once a suppression of the centre of infection; but the law relating to the compulsory removal of patients suffering from small-pox is so vaguely understood by the profession generally that it is for practical purposes useless. Let us take a case. I have a case of small-pox occurring in a family of four persons, a mother and three daughters. They occupy a small back room; and all eat, drink, and sleep together. Much of the space of the room is taken up by boxes, &c. The youngest child, unvaccinated, is attacked and dies. The sanitary authorities disinfect the place. A few days after, a second child is attacked, and upon informing the medical officer of health of the parish of the state of affairs, and asking for compulsory removal, I am informed by the superintendent of the sanitary department that "the facts of the case are to be regretted, but the removal cannot be compelled, unless the child was lodged in a room occupied by more than one family." I would refer the readers of this paper to the Sanitary Act, 1866, 29 and 30 Vict., cap. 90, clause 26. This is a plain statement of a fact which I humbly leave for the further consideration of the profession and the public. Removal of a patient from a crowded house should be always advised, and when there is not a separate room for his occupation, compelled. It scarcely need be pointed out that prejudice of the most unfounded type is the prevailing obstacle with the lower orders for removal. In my report to the Board of Guardians, dated September 21st, I referred to vaccination and cleanliness as the two principal factors in preventing the spread of the disease, purposely omitting isolation, which in the present practical interpretation of the law is inert. With regard to disinfectants, when they are used in chambers of sickness, the greatest benefit results from their addition to the excreta of the sufferer, effecting deodorisation at least when used about the rooms; on the staircases, landings, and halls, the amount of direct good which comes of it is at most questionable. Indirectly, it causes the parts where it has been used to be washed, and so is useful. Most disinfectants have an unpleasant smell attached to them, which is productive of stomachic derangement to those long exposed to it. The presence of this smell in the atmosphere of a sick chamber does not, I think, satisfy the profession at large that destruction of disease germs is consequent. They are possibly of service in washing soiled linen, but if used in large quantity the hands of the manipulator suffer, and if not used in sufficient quantity to effect this is it reasonable to suppose they affect the contagious properties of the soil? It is my experience that disinfectants used with other purpose than that of deodorising are a failure. I have never been able to trace a case were disinfectants have done any good in the way of destroying the contagious principle of disease. Having to the best of your ability made the infected chamber air-tight, and burning therein some sulphur in large quantity, with the paper stripped off the walls, and finally scouring the floor, I think you have done your best to destroy the principle of disease lurking in the apartment. The practical working of fumigation is interesting. Let us take a case: A youth, one of five in family, living in a flat of three rooms, is taken with small-pox; he is removed to the Small-pox Hospital, and the sanitary officer, being apprised of the case, makes his appearance and directs the fumigation. This is completed. Ten days after the removal of the youth a second case occurs, and the programme has to be repeated. Possibly a third may be laid with the complaint after another interval. Now from the commencement of the illness to the removal of the patient, most usually occupying from forty-eight to ninety-six hours, the door of the sick chamber is being constantly opened, and each time a current of air must necessarily be set in motion, which, if the chamber atmosphere be infectious, will convey some infection out. These repeated openings will charge the atmosphere in the passage with considerable quantities of foul air, and upon reflection it seems necessary to fumigate the passages as well. I need scarcely say that the same line of argument would apply to the entire house.

Cleanliness is a most protective agency against epidemics of all forms. The effect of dirty personal habits is but too well known in the out-patient departments of hospitals. A Poor-law medical officer is, however, drawn more closely into consideration of its results when attending the houses inhabited by the pauper class. The class immediately above that of pauper—namely, odd workmen who do two days work and drink four—are filthy in the extreme. The narrowness of their available means necessitates their taking the cheapest apartments, and their habits keep them in the dirtiest possible condition. Frequently one finds a pail, containing the general excreta of the family, deposited outside the door of their room, which may or may not be emptied

for hours, the floor unwashed, and the stairs not unfrequently bearing witness to the evacuation of the bowels of the children; the fireplace full of dirt, vegetable refuse and rags; very often a dog, some birds, and a cat contributing to convert the dwelling into a den of beastliness. What can be the result of such a state of things, but one calculated to hold out to disease the ready hand of welcome?

PROVINCIAL INTRODUCTORY ADDRESSES.

QUEEN'S COLLEGE, BIRMINGHAM.

THE inaugural address at this College was delivered by Mr. J. V. SOLOMON, who chose for his subject the state of Ophthalmology, embracing a period commencing just prior to the discovery of the ophthalmoscope, and extending down to the present time. After stating that it would be his aim to give the address a practical bearing, to embody some of his own unwritten experience, and to make it useful to those who had already acquired a certain knowledge of diseases of the eye, he gave a general survey of the progress made during the last quarter of a century in ophthalmology, and enumerated the various discoveries of workers in the specialty. Discoveries so important, he said, had been made, that an entire revolution had been effected in our views of the pathology, diagnosis, and treatment of diseases of the eye. Our knowledge of the anatomy of the tissues of the organ was now nearly if not quite perfect. A flood of light had been thrown upon the subject of optical accommodation and refraction. By the discovery of the ophthalmoscope the veil that intercepted our view of the deep parts of the internal eye had been for ever removed, and the confusion, doubt, and ignorance in which its diseases were immersed had been exchanged for almost exact knowledge. We must not forget, in indicating the causes of progress, that the mechanical arts had contributed no mean aid towards the perfection of operations the most delicate of any to which the human body was submitted. Instruments of the highest finish and perfection of adaptiveness to the oculist's purpose could now be purchased in every large town. A remedy by surgical operation had been devised for certain diseases which were lately considered as incurable, and for others the chronic nature of which, however carefully treated, was almost indefinite. Even cancerous and other tumours that were endowed with an energetic tendency to recurrence were now rendered, in respect of danger to life, much less formidable, with a hopeful prospect of future immunity. Mr. Solomon then described some of the morbid conditions of the eye, the various operations in vogue for their relief, and the nature of the cures effected. In conclusion, he said it would be unnecessary to expatiate upon the superior advantages possessed by the ophthalmic surgeon who had made himself familiar by contact with general disease as a physician and surgeon over one who left the medical schools to practise a specialty.

LIVERPOOL SCHOOL OF MEDICINE.

THE introductory address was delivered by Dr. GLYNN. After paying a tribute to the memory of the late Dr. Inman, and assuring those students who then appeared for the first time of the readiness of the staff to help them as far as possible, Dr. Glynn carried his hearers back to the time of Hippocrates and Galen, and dwelt on the struggles of early investigators, who had to contend against superstition, the prejudices of their age, and disadvantages from insufficiency of instrumental aid, showing also how errors from faulty methods of research or of reasoning retarded the development of medicine. Dr. Glynn brought his address towards a close by urging on the students the duty of working vigorously and in the direction of original inquiry. Every case should be the subject of an investigation, which tested the powers of observation and of reasoning. It is desirable, therefore, that the study of medicine should be entered on with all the force of scientific training. The necessary acuteness of sense and habit of mind is only to be acquired by exercise and discipline. Medical education has recently been rendered more efficient by the introduction of various practical courses which necessitate careful individual research and manipulation. It is, however, to hospital practice that the student must look for the most important lessons from which he will acquire practical knowledge of disease and of the action of remedies. He does a large amount of work in hospitals for which he expects neither thanks nor acknowledgment, recognising the special advantages he obtains. In taking notes of the daily condition of patients, making physical and analytical examinations, he renders great assistance to the physician or surgeon, who learns in a few minutes what would take him much time to discover—an important matter when many patients are to be visited. Finally, Dr. Glynn said, "I have not referred to opinions of the great ones of the past, or spoken lightly of their labours to excite contempt or ridicule, but to demonstrate to you the nature of the advantages you enjoy. In this age we do not fall into error from want of a guide or a true method. We are not encumbered by any false philosophy, and have no unhealthy reverence for authority.....We can boast of no perfect system of medicine, for our science is modified as our powers of research are extended, and our means of preventing or curing disease advanced. The scientific knowledge you may acquire if you follow your studies with spirit will not only prepare you for the successful exercise of your profession, but will afford you much happiness in an enlarged appreciation of the good and beautiful—an increased capacity for enjoyment of more value than gold."

SHEFFIELD SCHOOL OF MEDICINE.

THE address was given by Dr. W. R. THOMAS, who remarked:—"To be successful in practice, hard work becomes more and more necessary every year, the competition in our profession is now so enormous; but, however successful you may be, success will not bring pleasure alone, without its cup of bitterness; for generally the successful man is followed by envious detractors; your opponents may take a perverse pride in embittering the success they can never hope to destroy, but if you work steadily on, endeavour to do that which is right to all, and your best for yourselves, you will probably find that your detractors will crave for the friendship which at one time they may have spurned. And again, to be successful nowadays, brains are wanted; but talent alone is not what always enables a man to attain the position he yearns for in our profession, unless it be accompanied by energy and perseverance. Great talents are possessed by but few, but every man has the power to work hard and persevere if he will. The men who succeed best are often not the talented men, but the persevering hard-plodding men, who work steadily year after year, never give up, and often, nay I may almost say generally, in the race of life, pass their more gifted fellow students, thus proving that there is much truth in the lesson conveyed to us by the old fable the Tortoise and the Hare, and of that examples are to be seen day by day." Dr. Thomas brought his introductory address to a close in the following words: "When you read, remember that reading without proper observation and sound judgment will never supply you with what is required of a physician or a surgeon; it is well for you to profit by the experience of others, and know what has been found out by others; but, at the same time, think for yourselves, and read especially of cases which come under your own observation. Much food, without proper digestion, gives but little nourishment; so much reading without proper consideration is apt to be of little use. Remember that you have for your constant study and attention the most complicated and most beautiful beings created by the Great Architect of the universe. Remember that, by your teaching and your example, you can influence those beings for good or for evil. Take care that your influence be for good, so that when old age comes on, it will 'be accompanied by honour, love, obedience, and troops of friends,' that you may be able to look back with gratification to the amount of good done by you, and feel sure of the reward which always awaits the good and faithful servant.

THE LANCET.

LONDON: SATURDAY, OCTOBER 14, 1876.

How shall we best begin the coming winter session? This question, so urgently asked now by the deans of medical schools, was quite unheard of a few years ago, or was summarily dismissed with the reply, "It is Dr. So-and-So's turn to deliver the introductory lecture, and we can dine together afterwards." The introductory lecture was accordingly given, and at some schools was followed by a formal dinner among the members of the staff, and so the new medical year was ushered in. The dinner was as sedate and decorous as the lecture itself—an especially privileged friend or two being invited if their staid and correct demeanour could be unhesitating relied on. *Mais nous avons changé tout cela;* the grave and solemn introductory has had a funeral requiem sung over it at two of our largest metropolitan schools, and others are preparing to follow in their footsteps, whilst the dull and dreary staff dinner has given place to an old students' dinner, to which men of all ages, and from the most distant parts of the country, flock as to a jubilee. Even where the old usages are so far revered that the introductory lecture is still deemed a necessity, the lecturer is permitted to leave the main track, and take his hearers along any discursive by-path into which he may be tempted to wander. A slight reminder from the daily press next day may inform the "orator" that the public have not been instructed by his brilliant sayings, and this is all the correction that awaits him after his escapade. Another innovation this year is the introduction of a *conversazione*, and it is at this that we tremble. One may be endured, but should the other schools dream of following suit what a dreary prospect is before us! We perforce reconcile ourselves to these necessary evils in the summer, but that such a melancholy gathering as a professional *conversazione* should be considered a welcome to the new students, who wander about forlorn and disconsolate, is certainly a strange phenomenon.

We cannot help confessing that the old type of introductory lecture, solemn and scholastic as it sometimes is, has still some charm left for us, and we shall witness its disappearance with regret. Though we have heard the "same old story" often and often, yet we must not forget that to a large part of the audience, and to that part of it to which it should be more especially addressed, it is entirely, or almost, new, and they are not yet so familiarised with its truisms as to look on them with contempt. The brilliant and sparkling lecturer, like a display of fireworks, is a pretty thing to wonder at, but we look in vain for any after-traces of his presence; whereas he who, with an infusion of personal earnestness, points out the highest ideal to be attained in our professional education, and the most worthy means of attempting to reach thereto, now and then sows his seed in a fertile soil, and its benefit is incalculable. At any rate, the introductory lecturer can always give the newcomer a hearty welcome into our ranks, and the value of this at such a juncture cannot easily be over-estimated. We remember many such introductories in past years, and though the art of delivering them is not possessed by all our medical teachers, no more than the art of preaching to young people belongs to every clergyman, or of writing children's books to every literary man, yet every year some lecturers do this good work quietly and well. This year's addresses, we are sorry to say, have in most cases departed widely from their proper function, but one or two stand out in bold relief, because the lecturer has carefully considered what his object should be. The conversion of the staff dinner into a *réunion* of old pupils deserves every good wish, and cannot be too highly commended. Few can depart from such a gathering without having their daily routine of duty cheered by the renewal of old friendships, the remembrances of past days, and the revival of kindly feelings towards their *alma mater*.

THE development, in recent years, of the study of pathology, including morbid anatomy, has given a new turn to medical thought, and one which does not always tend to advantage as regards the great purpose of medicine—the healing of disease. It is easy to see in many practitioners the pathologist rather than the therapeutist. They are so impressed with the belief that every symptom must have a physical basis, if not a basis in organic change of structure, that their enthusiasm spends itself in finding this out, or rather in looking for it. It is not at all inopportune, at the beginning of the work of another session, that we should examine for a little this tendency of medical thought. It admits of such regulation as to be made serviceable to medicine, whereas, uncontrolled, it is apt to be unfavourable in its influence on the practitioner. We may, in a preliminary way, glance at the explanation of this fact. As we have said, it is greatly due to the development of the study of pathology, which has resulted in the discovery of a physical basis in many diseases which it is difficult to alter or remove. The older physicians were not let and hindered as we are by considerations about the physical basis of disease. If we take up an author like SYDENHAM, or FOTHERGILL, or HEBERDEN, we see how little they were hindered in this way. We open SYDENHAM almost at random, and come upon his "Treatise of the Dropsy," which affords quite a remarkable illustration of the point we are discussing. After about three pages of description of "the dropsy," in which its symptoms are described and the disease is said to "proceed from the weakness of the blood," the author arrives at what he calls the "genuine curative indications," on which he expatiates with delight over twenty-five pages. Not only is this the proportion of attention given to the consideration respectively of the nature and of the treatment of disease, but there occur in this treatise significant passages expressive of SYDENHAM'S estimate of the place and use of anatomical knowledge in the art of medicine. He fully appreciated the value of a gross knowledge of the structure of the body, but he denied the possibility of ascertaining its finer structure, and expressed himself as "fully persuaded" that nothing lends more to the foundation of a true judgment of the treatment of diseases than accurate observation of symptoms and "of the medicines and regimen which appear from practice to be beneficial or detrimental."

There was not only no morbid anatomy in SYDENHAM's estimate of dropsy, save his reflection on the strength of the blood, but he said it was impossible for the eye, assisted by the best microscope, to discover, for example, "those vessels through which chyle is strained through the intestines into the chyliferous vessels, or the ducts through which the blood passes from the arteries into the mouths of the veins."

In lighting upon this question of dropsy we have perhaps lighted upon the subject which of all others the modern physician would choose for illustrating the superiority of modern medicine. He may point exultingly to the labours of BRIGHT and CHRISTISON, of JOHNSON and DICKINSON, and a host of others; to the well-defined classifications of dropsy as depending on diseases of organs rather than on faults of the blood—diseases well defined by the help of methods and instruments of research from which SYDENHAM got no assistance, and did not expect that his successors would get any. In truth, there is probably no more brilliant page in the history of scientific medicine than that which sets forth the labours of BRIGHT in elucidating renal disease and its signification. What has happened in regard to this class of diseases has happened, or is happening, in regard to almost all others. So that what to SYDENHAM seemed a disease is now a mere symptom, and much of what he considered to be mysterious in disease, or, as he expressed it, "divine, or of the nature of a specific property, not discoverable by search into the structure of the human body," is now easy of explanation on physiological, or even mechanical, principles.

Besides the enormous development of the study of anatomy, healthy and morbid, one other discovery tended for a time greatly to discourage the therapeutical tendency of medical thought: we mean the discovery of much error in old methods of practice. The collapse of old theories of disease was naturally followed by the collapse of old theories of treatment. And, what made matters worse, before a new and rational system of treatment had time to be formulated, a system of therapeutics was advocated for the acceptance of the profession, or rather of the public, at once absurd and baseless. Add to this the prevalence of a sceptical habit of thought in regard to every department of belief, and we have ample explanation of the loss of interest in therapeutics which is sometimes charged against recent medicine.

It is high time, however, to rebuke and discourage this quality in practitioners, whether general or consultant. It is the error of consultants rather than of general practitioners. The general practitioner has more human and permanent association with his patient than the consultant, who is apt to regard him as a collection of symptoms. The general practitioner, too, naturally puts a lighter and more functional construction upon symptoms than the consultant. But, to do consultants justice, interest in therapeutics is reviving again, and claiming the attention it demands. What makes indifference in this matter more inexcusable is the fact of the wonderful additions to our list of remedies and remedial resources in recent years, and to our knowledge of etiology, so that in scores of ways unknown to our forefathers disease may be prevented, controlled, or absolutely cured. So true is this that of two men, one of whom has a little less faith in therapeutics and more knowledge of pathology, and the other has a little less knowledge of pathology and more faith in the resources of his art, the latter will be the more useful and successful practitioner. There need be no such distinction. There is nothing to prevent the best pathologist being the best physician. But the chief end of our studies is that we should be physicians.

A SUBJECT was just touched upon by Dr. BLANDFORD, in his introductory address, delivered at St. George's Hospital, which is of general interest, and deserves special attention. Speaking of the large number—upwards of 74,000—of insane persons under restraint in England and Wales, he observed that these unfortunates represent the last result and outcome of the various disorders of nerve-degeneration; and whilst a certain proportion are beyond the reach of medical art, such as those proceeding from bad food, bad air, unwholesome habitations, injurious occupations, and total want of occupation, others concern us more nearly, such as those produced by intemperance and by the transmission of inherited taint; and he instances not only idiocy and insanity, but epilepsy, neuralgia, chorea, and hysteria, as being conditions especially liable to result from transmitted nerve-disorder. There are various sources of these disorders, he went on to say, which are unavoidable, but men and women can help marrying when they have had attacks of insanity, or when their families are tainted through and through with the disease. In all such cases there cannot be a doubt that the medical man should oppose marriage, or, at any rate, should not sanction it. Nothing can be better established than that all the above-named affections are hereditary. BROWN-SÉQUARD's example of inherited epilepsy in guinea-pigs is too well-known to require more than a passing notice. ESQUIROL found that in 1375 lunatics insanity resulted from hereditary transmission in 337, or more than 24 per cent.; and PARCHAPPE estimated the proportion at 12 per cent., GUISLAIN at 25 per cent. BRIQUET arrived at the conclusion that 25 per cent. of those affected with hysteria had parents who suffered from nervous diseases, and nearly equal proportions would probably be obtained if reliable statistics of the other affections could be obtained. Dr. BLANDFORD limited his observations to nervous diseases, but, unhappily, nervous diseases, or rather diseases of the nervous system, are not the only ones that are hereditary. Gout, rheumatism, tubercle, scrofula, cancer, syphilis, with their endless modifications and varied consequences, here affecting the vascular system, there the osseous, here the organs of special sense, and there the mucous membrane or glands, furnish a long list of maladies which might well make the most fervid philanthropist despair, and lead a timid man to hesitate before he plunges into matrimony, or at least to inspect with some interest the family history of his future wife as well as his own.

As a set-off to this black side of the picture, however, it should not be forgotten that if the taint of disease be propagable from parent to offspring, so also are the highest qualities of the mind and body. Self-reliance, stability and honesty of character, a vigorous will, all usually associated with a sound physique, are as capable of being transmitted as tubercle or gout. Fortunately, too, as physiology

teaches, the blood has a power of self-purification; fortunately, under favourable conditions, the tendency of the seeds of these diseases to develop disappears, and with good air, good food, and free exercise, the offspring even of somewhat vitiated parents grow up healthy and strong. Yet everyone must feel what a vast leap in advance the national type, both of mind and body, would take, could we but prevent the two great forms of intemperance—intemperance in drink and sexual excess. No doubt the confinement and unwholesome ventilation of our factories, the indifferent food and inadequate clothing of the lower classes, would still be answerable for a large amount of disease; but if those two vices be curbed, as sooner or later, with the advance of knowledge, they surely will be, what a reduction would be apparent in our list of diseases and our bills of mortality. Was the superlative excellence of the Greek mind in its palmiest days due to freedom from excess in both of them?

It is important, moreover, not to confuse the heredity of certain forms of disease with the effects of consanguineous marriages. There is no doubt about the former, but much evidence requires to be collected before any positive statements can be made in regard to the latter. The view we have constantly held is, that healthy cousins are likely to produce healthy progeny, but that where there is distinct proclivity to disease on both sides such marriages should be opposed, not because the contracting parties are cousins, but because the existence of such proclivity in the father and mother is almost sure to result in the intensification of the disease. VOISIN satisfied himself that amongst 1557 cases of idiocy, insanity, and epilepsy, which came under his observation in the Bicêtre and Salpétrière, not one could be traced to a marriage of kindred—a rather remarkable fact; and Mr. CHILD has collected a considerable body of evidence to the same effect. If the parents have an equal predisposition to disease, it matters not, so far as the offspring is concerned, whether they are related or not. Under either circumstance, as Dr. BLANDFORD maintains, the surgeon's duty is to oppose, if not forbid, their marriage. Tastes, it is proverbial, differ in regard to what constitutes beauty in man or woman, but few will disagree as to health; and they will best consult their own happiness, and that of their family, who take a helpmate of sound constitution and pure blood.

Annotations.

"Ne quid nimis."

THE CHAIR OF PRACTICE OF PHYSIC IN THE UNIVERSITY OF EDINBURGH.

THE Curators of the University of Edinburgh have not had a more responsible duty than the one now before them of filling up the chair of Practice of Physic, vacated by the death of Professor Laycock, but which Edinburgh men still think of instinctively as "Alison's Chair." This is no mere Edinburgh question, or even a mere Scotch question. The practice of medicine throughout Britain, India, and the Colonies will be directly affected by the judgment displayed in this election. The interest of the University is deeply concerned in the appointment. It will not do for the University to have a teacher of Practice of Physic of less fame than is to be found in the sister Universities of Scotland, or in the extra-mural schools. Edinburgh has been greatly bereft of recent years of leading practitioners who gave it fame. But it may be congratulated on having a succession of younger physicians who will sustain its reputation for another generation. We speak of such men as Gairdner,—for we never think of Gairdner but as an Edinburgh man—Haldane, Sanders, Steward, Balfour, &c. It is the difficult task of the University to make a selection from men who have all distinguished themselves, either as physicians or teachers, or by most meritorious contributions to pathology. For ourselves, we are so anxious for an appointment that shall be unquestioned, and that shall put the teaching of this important subject in the University of Edinburgh into good hands, that we shall, without fear of offending others who may well aspire to this great chair, say that in our opinion it should be given to Dr. W. T. Gairdner, of Glasgow. We make the less apology for thus strongly recommending his appointment, that our columns last week contained a statement that might possibly mislead the Curators as to his willingness to accept the chair. Dr. Gairdner is an Edinburgh graduate, and essentially an Edinburgh man. It was no fault of his that he transferred his services to the rival city of Scotland, in the University of which he has, we believe, the largest class of pupils, in Practice of Physic, in Great Britain, or in any part of her dependencies. Dr. Gairdner was actually a candidate for this chair at the time of Dr. Alison's death. He is now in the very prime of his experience as a teacher and a physician, and the University would be greatly strengthened by bringing back to Edinburgh one of its own graduates, who should never have been allowed to leave. Dr. Gairdner may have some difficulty, considering his established position in the University of Glasgow, in putting himself into the position of a candidate, in competition with friends and juniors, whose claims he would be the first to see. But this feeling should give way. At any rate, we shall not be blamed for reminding the curators that the chair is of the very first importance in the interest of the art and science of medicine, and of the teaching of these throughout the world.

PROTECTION FROM SMALL-POX.

THERE seems much reason to fear that we are at the beginning of another serious outbreak of small-pox. The Registrar-General tells us that whereas up to the beginning of July, in this year, only 33 deaths from small-pox had occurred in London, 121 have occurred since then. Judging from the case of both Homerton and Stockwell, it is easy to imagine that the hospital accommodation may soon be insufficient. The character of the cases, too, is bad, especially those coming from Lambeth. Coincidently with this there is a considerable prevalence of scarlet fever and enteric fever. The Metropolitan Asylums Board decided to call the attention of the Local Government Board to the increase in infectious forms of disease. This is a very proper decision. It is lamentable to see such an increase when the means of preventing the spread of disease are so well understood. The Local Government Board has a great responsibility in this matter. It is virtually the National Board of Health to which alone we can look for the efficient administration of sanitary laws, and the incessant outbreaks of these deadly and yet preventable diseases suggest that either the laws are defective or ineffectively administered. We should like to see more proofs that the vestries of the metropolis are doing their best to ascertain the exact facts concerning the outbreak of small-pox, and to restrain its movements. We are happily able to publish a very full account of the outbreak in the north of London. But the sanitary authority seems to be doing nothing but asking medical men to

report cases and conveying the impression that the public can protect itself from small-pox by disinfectants. This is a most inadequate treatment of a grave epidemic by a sanitary authority. Medical men have other duties to perform than to report cases, and a sanitary authority that suggests to the public no other protection from small-pox than disinfectants misleads it and does almost more harm than good. In the meantime let individuals protect themselves by the only two means of protection—which are, however, all but infallible—revaccination, and, in the absence of this, keeping out of the way of the small-pox poison.

THE RUSSIAN RED CROSS SOCIETY.

THE representative of the Russian Red Cross Society in Servia has recently furnished to the Society a report of his proceedings, which gives a summary account of the distribution of the several detachments of the Society, and information as to other Russian sanitary detachments at the seat of war. From this account it would appear that at the close of September a detachment, under the charge of Dr. Dvoriachine, was established at Ioanovatz, near to Deligrad, and rendered intermediate service to the wounded transported from the forces in front to the hospitals stationed in the rear, the ambulance of this detachment forming a halting-place for the sufferers. A detachment performing similar functions has also been stationed, and an ambulance organised, at Paratchine. A hospital with forty beds has been formed at Tchoupria, and is under the charge of Dr. Tauber. A Servian field-hospital of eighty beds, in the same locality, is administered by a staff organised by the St. Petersburg Ladies' Committee, formed to give aid to the wounded, and is under the charge of Dr. Berliakow. To this hospital, moreover, the Red Cross Society has contributed certain materials for sanitary purposes, drugs, and money for the improvement of the dietary of the sick and wounded. Hospitals containing 150 beds, and under the charge of Russian surgeons, have been organised at Yagodine. These hospitals are maintained entirely at the cost of the Red Cross Society. So abundant and cheap is food here that each patient, it is stated, has cost, on the average, while in the hospital only twenty centimes a day! The Servian ambulances in Tchoupria contain 120 beds, and are administered by two Russian physicians, Drs. Rinck and Kolomnine. The ambulances at Pojarovatz are subsidised by the Red Cross Society, and are under the direction of Dr. Ostrovsky. Dr. Komarovsky, of Kostroma, is in charge of the hospital at Gradistche. At Semendria the sanitary detachment organised at the cost of the Old Believers of Moscow, is at work, under the direction of Dr. Marconet.

Other sanitary detachments are stationed as follows:—The second detachment from Kharkow, under Dr. Schulz, at Obrenovatz; the Dorpat detachment, under Professor Reyher, at Svilainatz; the detachment organised by the medical men of Moscow, under Dr. Nesterow, at Schabatz. At Kislovody (Aranjaivatz) is a Russian hospital of fifty beds, under the charge of Dr. Rakoussa. Here are ten sisters of charity attending to the sick, under the superintendence of the Baroness Fredericks and Madame Sabinine. A Servian hospital of fifty beds, established at Kislovody, will probably now be placed under the care of Russian medical men.

The sanitary detachment organised at Kazan is on the way to Kragonievatz, to organise and maintain at its own cost there a hospital of one hundred beds. A Servian field-hospital, also of one hundred beds, is about to be placed under the charge of Dr. Skvortsow.

On the 13th September the total hospital accommodation which had been provided in Servia at the cost of the Red Cross Society amounted to 500 beds. In addition, 100 beds had been established by the Old Believers of Moscow, and 100 by the city of Kazan. By this time the Servian hospital of 100 beds will have been transferred to Dr. Skvortsow; making a grand total of 800 beds, with necessary administration and maintenance, which the voluntary offerings of Russia have placed at the service of Servia.

The central office of the Russian Red Cross Society in Servia is established in Belgrade.

We have no information of the progress of the work done by the Russian Red Cross Society in Montenegro. In December last its operations in the interest of this province commenced by the despatch from St. Petersburg to Cettigne of a sanitary corps consisting of six medical men, ten sisters of charity, a dispenser, and a number of hospital attendants, abundantly provided with surgical and medical material, and having a purse of 20,000 roubles, with a reserve fund of 15,000 roubles. Moreover, 27,000 roubles was voted by the Society for the maintenance of a hospital at Cettigne for six months.

NURSING.

THERE appeared last month, in the *Victoria Magazine*, a periodical conducted by Miss Emily Faithfull, an article on this subject, which, we may at once record, would hardly have claimed special attention had not some attempt been made to criticise the administration and practical working of the Nightingale Training School for Nurses established in connexion with St. Thomas's Hospital. This establishment, as most of our readers know, arose out of a fund presented to Miss Nightingale after her efforts in connexion with the Crimean war, and appropriated at her request to this special purpose. St. Thomas's Hospital was first opened to receive probationer nurses in 1859, by arrangement with the Nightingale Fund committee. At first, according to the article above quoted, "the women trained at St. Thomas's on the Nightingale system consisted of those of the housekeeper class, who saw before them a prospect of a respectable and comfortable living with no unusual expenditure of labour." The kind and number of workers, however, did not give promise of a brilliant future, and about eight years ago a special appeal was made by Miss Nightingale, which appears to have been most successfully responded to, though, of course, weeding almost by wholesale was at first a necessary and inevitable process. The governess class is said now to recruit chiefly the staff the members of which are sent out as hospital nurses, sisters, and superintendents, and the number of workers is declared to be now about equal to the ordinary demand. Two classes are instructed at the Nightingale establishment. Special probationers are received, who pay £30 for cost of maintenance during their year of training, this arrangement having been made for the purpose of giving gentlewomen an opportunity to qualify themselves in the practice of hospital nursing. The training occupies a complete year, at the close of which they are expected to continue for three years their connexion with the institution, work being found for them at some hospital or other institution established for the relief of the sick. The second class includes those desirous of being trained as hospital nurses, who receive during the year of training payment in money and clothing to the value of about £16, being boarded and lodged at the cost of the Nightingale Fund. It is not, however, with this latter class that we are now specially concerned. The article before us recites that "at St. Thomas's Hospital educated probationers, paying for their own board, do not receive a commercial equivalent not only for their money, but for the immense physical outlay involved by their year's training. Throughout and at

the end of the year the same menial offices are required from them as from the second class of nurse probationers, who receive, besides their board, a gratuity of £16." The writer proceeds:—"It is absolutely necessary that educated women should be trained to perform every office for the sick as competently as the nurses they will ultimately have under their orders; but proficiency once attained it is the due of each who pays for, and who is supposed to be receiving, a special education for a purpose, to be employed during her short period of studentship more profitably than in making beds, sweeping floors, and cutting up bread and butter."

We have perused the rules and last report of the Nightingale Fund, and fail to find any special regulations that indicate a difference of treatment or of duties between one and the other class of probationers. The rules, in fact (except as to age and one or two minor matters), appear to be almost identically the same. But the question at issue (if there be good and sufficient grounds for the remarks above recorded) is whether these lady probationers, who, from their superior education, &c., are more likely to rise quickly to the higher grades, should be called upon to fulfil so long a term of so-called drudgery as those who will not rise beyond the rank and file. The report of the Fund is so meagre as to its details that criticism is difficult, but as the particulars of working are freely dealt with in the article before us, it appears desirable that the public should know more as to the internal arrangements of an institution the workers in which have done a large amount of good in revolutionising the system of nursing throughout the kingdom. The subject is just now attracting so much attention, that a communication from the secretary of the Nightingale Fund, giving particulars as to the rise and progress of the institution, would be both interesting and instructive.

MEDICAL OFFICERS OF HEALTH AND HOSPITALS FOR INFECTIOUS DISEASES.

THE Runcorn Improvement Commissioners, as the local urban sanitary authority, at their last monthly meeting, passed a resolution the effect of which is to close a hospital for infectious diseases which had been available for cases occurring within the urban and port sanitary districts. Small-pox has been to some extent prevalent in Runcorn, and several cases had recently been successfully treated in the hospital in question. Dr. Steele, in the course of the discussion respecting the resolution "that no further cases be admitted into the hospital," very naturally asked how future cases of small-pox or other infectious diseases were to be disposed of, and was told that they would be taken to the workhouse infirmary at Dutton, which is situated about four miles from Runcorn. This retrogressive sanitary measure, taken when the generally increasing prevalence of small-pox greatly enhances the importance of such hospital accommodation, makes it desirable to inquire the reasons which can have induced the Improvement Commissioners to take such a step. It is easy to conclude, from the report of the recent meeting of these commissioners, that the relations between them and their medical officer of health (Mr. R. H. Mouritz) have not been altogether satisfactory. The salary of this officer is fixed at £20 a year, although there appears to be some doubt as to what duties are covered by this magnificent amount. A good deal of astonishment is reported to have been expressed on the part of some of the commissioners at receiving an account for £49 7*s.* from their medical officer of health for attendance on small-pox patients in the hospital for infectious diseases. Without expressing any opinion upon the desirability of a medical officer of health being partly paid by fees for attendance on patients in a hospital belonging to his sanitary authority, it is obvious that it could never have been contemplated that the salary of £20 per annum should cover attendance on patients in the hospital for infectious diseases during a small-pox epidemic. This misunderstanding has probably had not a little to do with the unfortunate resolution of the Runcorn Commissioners to close their hospital, and is entirely due to the mischievous system of appointing medical officers of health at nominal salaries, in some cases supplemented by fees. If the improvement district of Runcorn had combined with other sanitary districts for the purpose of appointing a medical officer of health at a salary which would command his whole services, the unfortunate misunderstanding which has resulted in what we trust is only the temporary closing of the Runcorn Hospital would have been avoided.

DEATH FROM CHLORAL AT CARLISLE.

THE frequent occurrence of cases of accidental poisoning by an overdose of chloral suggests very pressingly the question whether chloral should not be treated as the poison which it unquestionably is, and placed on the "Sale of Poisons Register." An illustration of the extent to which the self-administration of chloral is prevalent is afforded by the death of an official in Carlisle Gaol from a dose of the drug. The man, seventy years of age, had been suffering for some time from a "painful disease," and had got into the habit of taking chloral to procure sleep. He had obtained the chloral from a chemist five or six times, asking, it was stated, for "two pennyworth of chloral," and receiving about forty grains of it for the money. This half filled a bottle labeled "Take one-half to-night and the other half to-morrow night." On one occasion the bottle was filled, and the man appears to have taken the whole of it at a single dose. This was estimated to be about eighty grains. Some excitement at first was noticed, but after some hours he fell asleep, and slept, the sleep deepening in intensity, for about ten hours, when he died. This history is by no means singular. It is a common and well-known action of the drug. It illustrates how dangerous the habit of self-administration of chloral is, and how strongly restrictions on its free use are needed for the safety of the community. The chemist, who was a lad of eighteen, acted quite legally, but that such action should be legal shows as strongly as do the facts with regard to the sale of opium, on which we lately commented, how urgently an amendment of the Pharmacy Act is required.

HEALTH OF THE EX-SULTAN.

DR. CAPOLEONE, at the instance of the reigning Sultan, has just held a consultation on the health of the lately-deposed Murad in presence of Drs. Mepieux, Adi Pasha, and Mongeri. Their bulletin, of which the following is a summarised translation, sets forth that the ex-Sultan has for three months been a prey to haunting hallucinations, and believes himself pursued by vampires and other monsters of the fancy. He has frequent attacks of cerebral toxæmia, during which the utmost vigilance on the part of his attendants is called for. These are followed by obstinate taciturnity and utter listlessness of mind and body. The pupils continue undilated, the expression is void of intelligence, and the whole aspect is one of extremely lowered vitality. There is persistent insomnia and almost entire abstention from food or medicine in the solid or liquid form. The emaciation is very great, accompanied by harshness of the skin. Convulsive contractions of the muscles of the face and of the limbs have latterly appeared, and the gait is that of one who might at any moment collapse under

paralytic seizure. The memory is quite gone, such mental faculties as remain are reduced well-nigh to imbecility, and all sense of shame has vanished. Dr. Capoleone and his colleagues hold out the darkest prognosis, and anticipate the close as that of progressive paralysis of the insane. The patient was examined in the palace of Tchiragan last week, and could neither move from the arm-chair in which he was found reclining, nor articulate a single intelligible word in answer to the questions put.

THE CARNARVONSHIRE COMBINED SANITARY DISTRICT.

THE *Local Government Chronicle* announces that in virtue of the provision inserted in section 286 of the Public Health Act, assigning to the district medical officer of any union, comprising or coincident with any constituent district, such duties in rendering local assistance to the medical officer of health for the united district as the Local Government Board might think fit, an order has been issued which is to come into operation on the 1st of November, directing the district medical officers of certain unions in Carnarvonshire to act as assistants, so far as regards the districts respectively under their care, to the medical officer of health for the united district. They are required by the order to inform the chief officer of health forthwith of the outbreak of any dangerous epidemic in their respective districts, to act temporarily in his place, pending his arrival or instructions, to give him such further assistance, in the case of any outbreak of disease, as he may require, and to transmit to him weekly a copy of their medical relief books, so far as relates to new cases of sickness in the district, together with a statement as to the deaths of the pauper patients of the district. For the appointment of medical officer of health to the Combined Sanitary District of Carnarvonshire, the salary of which is £300 a year, there were, we understand, fifteen candidates, from whom Mr. Hugh Rees was selected to fill the post. The stipulation of the authority that candidates for the appointment should possess a colloquial knowledge of the Welsh language was a wise one, and receives ample justification when we look at the choice assortment of consonants which enter into the construction of the names of a few of the urban sanitary districts. For instance, it would be disheartening to anyone unacquainted with the vernacular to have to inquire his way to Dwygyfylchi, or take a railway ticket for Ynyscynhaiarn.

WOOD-PAVING.

THERE are so many urgent reasons why the Strand ought to be paved with wood, and so few against the proposal, that the issue of any honest deliberation on the subject, free from prejudice, might be foretold. Unfortunately a deliberation free from prejudice is difficult to obtain. There is a notion abroad that wood will not last so long as stone, and, therefore, must prove more costly. That misconception is sufficient to prejudice the question. We are not surprised that the notion exists, because the manner in which this business of paving has been "muddled" in certain localities is so incomprehensible that any wrong impression arising must be excused, if not explained. If the vestry will only proceed with ordinary tact in the matter, profiting by the experience bought elsewhere, this noisy neighbourhood may cease to be intolerable to residents and even to visitors. At present the state of matters is deplorable in the extreme. As regards the traffic itself, a crowded thoroughfare so narrow that blocks are constantly occurring, must needs be especially trying to horses, to say nothing of the wear and tear of vehicles. The perpetual striking of the iron shoe on the hard stone not only occasions unnecessary pain to the animal, but seriously lessens his power of work, and shortens his term of service. The injury inflicted reaches its maximum on a line of roadway over which omnibuses, collected from some half-dozen distinct routes, are running from morning until night, and stopping every hundred yards to set down or take up passengers. Meanwhile, the suffering entailed by the ceaseless din on persons who are compelled to pass their days in the Strand is most serious. Visitors to London who for a night or two sleep in the streets leading out of this great thoroughfare, watch the hours in restless excitement. Those who are compelled to reside in the locality—although no doubt some become inured by habit to the annoyance—sustain injuries to the nervous system which are not easily exaggerated. We do not overstate the case when we assert that to the sensitive and delicate the evil is of the greatest magnitude, and its consequences cannot be counteracted. Noise is not only a nuisance but a source of irritation that exhausts the strength and impairs the vitality of the brain it assails. Health and prosperity are alike concerned in this question. What has been done for the relief of the patients in Charing-cross Hospital must be extended for the personal and general advantage of residents and those who frequent the neighbourhood.

WATER-SUPPLY IN NEW YORK.

THE water-supply of London, with all its defects, is in many respects superior to that of most of the other large cities of the world. The unusual drought of the past summer season had brought home to the population of New York the insufficiency and inferior quality of the water-supply of that city in a manner which has resulted in an agitation for an improvement therein. The fact that the water-supply in New York is cheap can in no way be accepted as a set-off for its serious defects. The supply is obtained from some lakes in the vicinity of the city, the water of which has in recent years become more and more liable to contamination from the rapid increase of population in the neighbourhood. The waterworks belong to the municipality, and as the rates charged are now low, there should be no difficulty in securing a more abundant and purer supply. In New York the basis of charge for the water-rate was the extent of frontage, and the charge for water to a dwelling-house rented at £200 is only eight dollars per annum, or less than £2. An extra charge is made where water is used for other than domestic purposes, or where horses are kept. Those interested in the various forms of local self-government can learn much in the United States, where many problems which in England are still being discussed in a theoretical and speculative manner, have been solved by experiment, and are found to be eminently practicable. At Providence, in Rhode Island, as in New York, the water-supply is in the hands of the municipality, and is entirely regulated by meter. The charge is three cents. per 100 gallons. The system is not only manifestly equitable, but affords security against the wastefulness of the old rating system. It is doubtful whether the adoption of water-supply by meter would check the use of water for any useful purpose, while the mere waste of water confers no sanitary benefit.

INFANT MORTALITY.

IN the course of the Brussels Conference, which brought its labours to a close last week, the subject of infantile mortality in France was discussed. That the death-rate of infants in that country is alarmingly high no one will attempt to deny. Proof is furnished annually by statistics of the magnitude of the evil, to remedy which no attempt whatever appears to be made by the Legislature. Among

one of the fruitful causes of this excessive mortality one speaker placed the use of a medicine called *le dormant*, something allied to the villainous "soothing syrups" with which children are dosed to death in this country. Another cause is the insufficient nourishment afforded by mothers, who are obliged to work immediately after their babes are born. We know to what an extent this condition is destructive to infant life in the English manufacturing districts. It was argued that women should be forbidden by law to return to their occupation within a month of childbirth, and that a charitable fund should be organised to support them during this period. At Mulhouse such a fund already exists, and efforts had been made to establish one in Lille, unfortunately, however, without success. It was finally resolved to collate statistics from each country in Europe of the mortality of infants under one year of age. We shall await with much interest the appearance of these returns. The supervision we are now enabled to exercise over women who take infants to nurse and rear, by enforcing registration, has worked incalculable good in protecting young life, and justifies us in hoping that England will show favourably in the comparison. The Infant Life Protection Act of 1872 enacts that no person is to receive for hire more than one child under a year old for the purpose of nursing it apart from its parents except in a house registered by the local authority, the applicant being a person of good character, the registration to remain in force for a year only. During the year 1875 the total number of houses registered was only five, and they were authorised to receive but eleven infants.

THE ROYAL COLLEGE OF SURGEONS AND THE MEDICAL DEFENCE ASSOCIATION.

THE correspondence lately published in our columns between the East London Medical Defence Association and the Royal College of Surgeons of England is not satisfactory, and leaves an unpleasant impression that this great corporation, which enjoys an income of nearly twenty thousand pounds a year, derived for the most part from the profession, is too apathetic to use its powers to punish illegitimate practice. We do not want the College, and we gather that the Medical Defence Association does not want it, to undertake Quixotic and irrational prosecutions against every person practising surgery in London or Westminster without holding a licence from the College, or being an English physician. But surely the College might sanction and aid an association which seeks to punish those who are practising surgery who hold neither a surgical nor any other diploma. If the profession is to have no assistance from the College in such cases, it has good reason to complain of want of sympathy in what ought to be one of its most representative bodies.

INSANE PATIENTS ADRIFT.

ATTENTION is again called to the practice of allowing patients resident in the asylums around London to go out alone and unprotected. An inmate of Sussex House was found standing in the middle of a busy thoroughfare, and with difficulty rescued by a constable. On being asked his name, he proclaimed himself "King of the Jews." The man was brought before the magistrate and claimed as a certified lunatic. He had "behaved well," and was allowed to go out on *parole*. This going out "on *parole*" is a perilous practice. The largest measure of liberty consistent with the safety of patients and the comfort of the public is doubtless expedient, but we think precautions should be taken to ensure not only safety but propriety. Our present object is to suggest that when patients are sent out they should be accompanied either by an attendant or a friendly patient. The insane are exceedingly observant of those around them, and keep a watchful eye on each other. It is improbable that two patients out together would affect the same eccentricities. Any departure from propriety on the part of one would most likely incite the other to exceptional sobriety. By thus associating well-behaved lunatics, their continued good behaviour might be secured without abridging their cherished liberty.

SUNDERLAND PORT SANITARY AUTHORITY.

WE learn from a report by Dr. Yeld that since the formation of this authority, twelve months since, 410 steam and 555 sailing vessels have been inspected, making a total of 965, of which number 943 were British ships. The need of inspecting ships in port is sufficiently shown by the insanitary condition in which 540, or nearly 60 per cent., of these vessels were found. In 170 the conveniences were in a state "calculated to be highly injurious to the health of the sailors." It was at first feared in Sunderland that the inspection of vessels would unduly disturb shipping, and harass shipowners. Such, however, has not been the case. Except in a very few instances, both captains and shipowners have co-operated with the inspector in the discharge of his duties, and masters and men now recognise that what the authority requires is that vessels shall be kept in such a condition as will conduce to their own health and comfort, and also prevent the introduction of infectious diseases into the town. As many officers of foreign vessels appeared to be ignorant of the fact that they were amenable to the scope of the Public Health Act, the Sunderland port sanitary authority, acting on the advice of Dr. Yeld, addressed a letter to the various consuls and consular agents, calling their attention to the 10th section of the Act, and asking them to assist, as far as possible, in carrying out the provisions of that section. Acquiescence was readily promised. The docks, shore, and river, which are periodically inspected, are reported to be, with the exception of a few defects connected with sewer outfalls, in a good sanitary condition.

CERTIFIED MEDIUMS.

NOT to be behind more mundane personages, the supposititious Spirits which are so successfully befooling weak-minded mortals, have deemed it necessary to issue diplomas for the distinguishing, in the interests of the human race, true from false mediums. But here is a difficulty: the spirits undertake to guarantee the mediums, but who will guarantee the spirits? Be this as it may, however, these diplomas show how closely the mediumistic spirit-world corresponds in its habits of thought and action with the world of every-day life. We do not know whether any English mediums have as yet been honoured by diplomas. Our information is from Russian sources, and specially relates to a certain Russian medium, M. Sidoroff, who died not long ago. Among his papers his executors found the diploma, of which the following is a translation:—

"Re-incarnation and evocation of Spirits. No. 11. Continuity of Life from Age to Age and World to World.

"DIPLOMA.

"The Legion of Spirits, recognising your ardent and unlimited zeal for the science which reveals the mysteries of the supernatural power of Spirits, consecrate you a MEDIUM, in order that you may serve as a link of union between the material World and the immaterial World, and may transmit to the profane manifestations from the Spirit World. In token whereof the present diploma is conferred upon you.—Paris, 1st January, 1876.

"RENARD, Great Pontiff.
"GIZO, Secretary.

"Conferred upon APOLLON SIDOROFF."

It will be observed that this diploma would appear to have been the eleventh issued by the Spirit Legion, and as several other individuals in St. Petersburg received diplomas from the same source at the same time as M. Sidoroff, we must infer that Russia is especially favoured in the matter of mediums. How it comes to pass that a Paris mediumistic circle should have been inspired to constitute itself a University for the issuing of spiritual diplomas will be no mystery to those who are familiar with the progress of mystical studies and speculation in France of late years.

THE PROFESSION AND THE NEWSPAPERS.

SOME of our brethren have yet to learn the sentiments of their profession respecting medical communications to the non-medical press; we are glad, therefore, to notice the action taken in the matter by an American medical society.

"The accompanying notice was, in 1872, sent to all members, and it is again published in the Transactions as a reminder to delinquents:—'The Council desires to call the attention of members to the fact that the names of certain members of the Society have recently appeared in the public prints in connection with medical subjects. The Council having charge of the ethical relations of members hereby gives notice that such cases will be investigated.' The Council also calls to mind the fact that this Society has a standing Committee on Public Instruction, to which it would be fitting to refer all matters important to be made known to the public. If any member prefers not to act with that Committee, or if he thinks he has an especially urgent message to deliver to the laity, it would be in accordance with the spirit of our ethics to sink his personality for the time being. This may readily be done by the employment of an initial or *nom de plume*, instead of the full name, in or after articles intended for the medical edification of the secular press."

This is highly creditable to the profession on the other side, and affords an example which might be copied with advantage.

"MASTER AND MEDICAL OFFICER."

WE have already referred to the case of William Lee, who was brought in a dying state into the Bethnal-green Workhouse, and who did not receive immediate medical attention in consequence of the medical officer being out, and the master of the workhouse not thinking it necessary to send for his deputy. The guardians of the parish of St. Matthews have been deliberating on the case, and have come to the conclusion that there was a want of accord between the master and the medical officer. Both officers were called in, and the chairman informed them that they had both neglected their duty, and that if they did not agree better their conduct would be reported. This is a same conclusion to arrive at on a very serious question, and the guardians may rest assured that a better accord between these officers will not be obtained till their respective duties are more accurately defined, and until the medical officer is treated as an independent authority in his part of the establishment.

A PARK FOR BRIGHTON.

BRIGHTON has been so important to London in times past as a place of residence and resort that it will be regretted if anything compels it to yield the palm of popularity. There is, however, not a little danger of that misfortune befalling London-super-Mare; and the cause will undoubtedly be the more than common blindness to local interests shown by the "sanitary authority." That body cannot be induced to do anything in the way of "improvement" without coercion. The one great drawback to Brighton has always been the want of rural accessories. A park would be a very tolerable substitute for pleasant country surroundings. Ground for the purpose is just now, we believe, available, but, with characteristic obstinacy, the Council refuses the opportunity on the score of expense. *Quem Deus vult*, &c.

THE OLD STUDENTS' DINNER AT ST. BARTHOLOMEW'S.

DR. ANDREW presided on Monday, the 2nd of October, at this dinner, which was given as usual in the fine old hall of the hospital. About 120 old students were present, and the guests included the President of the College of Physicians, Sir George Burrows, Sir James Paget, the Treasurer, Sir Trevor Lawrence, Mr. W. F. Favell, of Sheffield, Professors Flower and Odling, Dr. Black, &c. The toasts were felicitously rendered by the chairman, and the company have again to be grateful to the administrative energy and untiring courtesy of Mr. Langton, who organised the banquet.

A LEGAL SEANCE.

THE proceedings before Mr. Flowers in the "Slade" case are enlivened by performances which, wholly apart from their forensic character and bearing, possess a special interest growing out of the circumstance that Mr. Maskelyne explains his tricks as he proceeds. We are not surprised to hear that the Court is crowded; it is even possible the demand for seats may exceed the capacity of the apartment. In that case it might be convenient to adjourn the sitting to the adjacent theatre.

THE reference to sanitary matters in the Fifth Annual Report of the Local Government Board for the year 1875-6 gives the city of Lincoln unenviable prominence. It is stated that the Board, having been satisfied by special inquiry that the Urban Sanitary Authority and Town Council of that city had been guilty of default in not providing their city with a proper system of main sewerage, and being unable to induce them to undertake the requisite works, were eventually obliged to avail themselves of the 299th section of the Public Health Act of 1875, and to institute legal proceedings against the Mayor and Corporation for the purpose of obtaining a writ of *mandamus* to enforce obedience to an order of the Board. The writ of *mandamus* was directed to be issued by the Queen's Bench Division of the High Court of Judicature, but at the last moment its enforcement was rendered unnecessary by the Sanitary Authority taking the requisite preliminary steps for the execution of the required works. It is to be feared that the Lincoln Town Council, as the Urban Sanitary Authority, have not an adequate appreciation of the value of public health, since they pay their medical officer of health the magnificent salary of £20 per annum!

IT would produce great satisfaction both among the profession and public if the Home Office would give its earnest attention to the pressing need for providing better mortuary accommodation for the metropolis. The wretched apologies for mortuaries found in so many districts are most inconvenient to medical men, and most dangerous to the public health. There is some promise that action of a definite nature will ere long be taken in the matter, for we gather from a report of the proceedings at a recent meeting of the St. Olave's Board of Works, that Dr. Vinen had received from the chief of the Burials Department a list of questions regarding the state of the mortuary in the district; his replies to which showed the insufficiency of the existing accommodation. Evidence to the same effect as that furnished by the medical officer of health for St. Olave's may be obtained on solicitation from most of the metropolitan districts.

THE town clerk of Manchester has prepared and submitted to the Manchester City Council a report upon the Pollution of Rivers Act of last session, in which he endorses the opinion of *The Times* that the general impression left by a careful consideration of the Act is that it provides "a machinery likely to be both costly and troublesome for producing an effect which is not likely to be very important." Especially is the word "knowingly" objected to in Clause 2, with reference to the offence of putting, or causing to be put, solid refuse into any stream so as to interfere with its due flow or to pollute its waters. The town clerk, however, hopes that if the imperfect powers given by the Act are energetically put into operation some good may be done, and urges upon the consideration of the corporation the desirability of appointing inspectors to see that the provisions of the Act are not infringed. There are few of the large English towns that have stronger interest than Manchester in making the best of the Act "for making further provision for the prevention of the pollution of rivers."

THE Local Government Board has given formal notice that, in consequence of the Solihull sanitary authorities having refused to combine with the other authorities in appointing a medical officer of health, the Board would, at the expiration of twenty-eight days, proceed under Section 236 of the Public Health Act to make an order forming the rural sanitary authorities of Meriden, Rugby, Solihull, Southam, and Warwick, and the urban sanitary authorities of Lillington, Milverton, Rugby, and Warwick into one district. We believe that this is the first time that the Local Government Board will have been under the necessity of enforcing the particular section of the Act referred to. Dr. Wilson, whose report on a late outbreak of enteric fever in Rugby we noticed a few weeks back, will continue to act as medical officer of health for the Rugby urban sanitary district until an officer has been duly appointed for the combined district.

WE regret to announce the death, at Barbadoes, of Mr. Thomas Matthew Raye, M.R.C.S., of the British Guiana Medical Service. Mr. Raye was formerly house-surgeon at St. Mary's Hospital, London, and at the time of his decease held the post of assistant-surgeon in the Colonial Hospital Georgetown, Demerara, where, by humanity and skill, he had gained a firm hold on the affections of all with whom he was associated. A few weeks ago he left Georgetown for Barbadoes for the benefit of his health, but died on the 21st ult., in his thirty-second year. In speaking of Mr Raye, the *Colonist* very truly remarks: "There are many in this colony who will miss the pleasant face and the genial, kind-hearted ways of this accomplished gentleman."

THE second annual conference of guardians in the North-western Poor-law district was held last week in Manchester. After an address from the chairman, Dr. Costine, West Derby, read a paper entitled "Has the present system of the Administration of the Poor Laws increased or decreased Pauperism?" the conclusion to which he had come being that the reformed Poor Law had diminished pauperism, because it was based upon the principle, hard as it may appear in individual cases, that "independent poverty" ought to be held disgraceful. On the discussion of a resolution to the effect that further restrictions should be placed upon the administration by guardians of out-door relief, Mr. Salt, M.P., Secretary of the Local Government Board, who explained that he was present not in any way as the representative of the department, said that the Board were watching with very great interest and thoroughly appreciated the efforts which were being made in Manchester and elsewhere in the direction of improving the administration of the law. With regard to the attitude of the Local Government Board, he was personally inclined to think that the cause they had at heart would be far more advanced by the various boards in different parts of the country than by any immediate and direct action of the central Board Papers were also read by several gentlemen, and a deputation was appointed to represent the North-western Association at the general conference to be held in London during the winter.

THE inhabitants of the Scilly Isles have been suffering for the past month or six weeks from a severe epidemic of mumps. Most of the children have had the disease, and it has now attacked several of the adult population. Many of the cases have been complicated with orchitis, or with inflammation of the breasts.

WE understand that the pathological specimens of malformations of the human heart lately presented to the College of Surgeons by Dr. Peacock will shortly be placed in the museum.

DR. MCKENDRICK has been appointed to the chair of Physiology, University of Glasgow.

SURGICAL NOTES OF THE WAR IN THE EAST.

BY WILLIAM MAC CORMAC, F.R.C.S.,
SURGEON TO ST. THOMAS'S HOSPITAL.

As some short account of what I observed in Servia and Turkey during my brief visit to the seat of war may interest the readers of THE LANCET, I send the following notes. I must first premise that the operations of the armies engaged are upon a very small scale as compared with recent great wars, and that therefore the number of wounded is not excessive, and the surgical interest is necessarily less great. The amount of distress and misery, however, resulting from this war is out of all proportion to its magnitude.

I reached Belgrade on Tuesday, 29th August, and immediately put myself into communication with the chief of the medical department, Dr. Sava Petrovitch, and with the minister of war, to ascertain the condition, number, and wants of the wounded, and with regard to how best the aid of the National Society might be afforded. I also visited the hospitals in Belgrade. Colonel Loyd Lindsay, as president of the National Aid Society, had himself undertaken to visit the scene of action so soon as it was known officially that the contending parties desired and needed its help, and he had requested me to accompany him as surgeon-in-chief of the Society. I should mention that my colleague, Mr. MacKellar, had preceded me a fortnight before, and that I had selected to accompany him five gentlemen, Mr. Atwood, Mr. Hume, Mr. Hare, and Mr. Sandwith, as surgeons, and Mr. Boyd as dresser. I knew by experience the disadvantage of isolated effort and the advantage of concerted action; and the propriety of thus sending a number of men out together has been amply proved by the very brilliant services rendered by those gentlemen at Alexinatz during the series of engagements which took place there, and of which doubtless they will render a good account. These gentlemen were partly chosen by me acting as an honorary associate of the Order of St. John, under whose auspices some of them were sent out; some undertaking, if need be, to pay their own expenses. As soon, however, as the National Aid Society saw the possibility of rendering assistance from their large resources, my first recommenda-

tion as surgeon-in-chief of that Society was to advise that all those gentlemen should be received as officers of the National Aid Society—a recommendation at once agreed to by its President. Besides these gentlemen, we were accompanied by seven others, whom I had chosen: Messrs. Leslie, Charles, Pitts, Brock, and White, as surgeons; and Messrs. Barker and Little, as dressers. I also personally selected and brought with me a large quantity of surgical stores—instruments, appliances, medicines, dressings, and disinfectants; and six hospital marquees were given from the Government stores. The principle of the Society, which has been thoroughly carried out, was to distribute both surgeons and stores impartially for the help of the sick and wounded of both sides. All these stores reached their several destinations safely; and the surgeons sent to the Turkish head-quarters have been acting in the Turkish front with the same energy and efficiency which characterised Mr. MacKellar's party in the Servian lines. Nothing whatever has been lost; and the large quantity of material brought out, including the hospital marquees and a large hospital tent purchased in Vienna, has been distributed to the places on both sides where the need for them was most felt, and all this within a very brief interval of time. It was explained to Prince Milan and his ministers that whatever aid should be given to the Servians would be rendered to a like extent to the opposite party—a course of action to which they cordially and completely assented.

In Belgrade, at the date of my visit, there were six hospitals in operation, containing in all 700 beds. Although these were not more than two-thirds occupied, Dr. Sava Petrovitch considered 300 more were presently needed, as the sick and wounded were daily arriving, chiefly by river steamers, which brought them, under the superintendence and direction of Baron Mundy, from Semendria or Dubrowitza on the Danube, stations much nearer the scene of action than Belgrade. Baron Mundy, with an energy all his own, had thoroughly organised the system of speedy "evacuation." All the sick and wounded, even severe cases, were removed from the front, and drafted to various hospitals in Paratchin, Tchupria, Jagodina, or further on to Semendria and Belgrade. The transport system is slow and painful, being almost entirely in bullock-waggons in the bottom of which some hay or straw had been placed. Anything, however, was preferable to allowing the sick and wounded to accumulate near the front, where provisions were scanty and bad; and although doctors and nurses abounded—nearly all Russians—still the needful appliances and dressings were insufficient, and epidemic disease would have certainly broken out. One excellent service rendered by the National Society was to purchase and horse three ambulance carriages, and these, under the management of Mr. Barrington Kennett, will do much good work, as that gentleman has had an extensive similar experience during the Carlist war.

I visited four of the hospitals in Belgrade. Two of the military hospitals were overcrowded and ill-ventilated. A third hospital was under the direction of a former assistant of Professor Billroth, a most admirable surgeon. The cases there were all treated antiseptically, and the hospital itself was a pattern of cleanliness and comfort. The nurses were Russian women, and there was also a Russian lady doctor whose scientific pretensions were, I hope, greater than her personal ones.

The last hospital I visited was at Topschidere, constructed after Baron Mundy's plan of open-air baracken. There are 150 beds, and a full staff of Russian surgeons and sisters of charity belonging to the sect of the "Ancient Believers." Here also everything that was needed was at hand, but there were only two patients, men suffering from intermittent fever. Since my visit, however, the hospital has been filled up with sick and wounded. Its situation did not appear to me to be a satisfactory one, being placed in the low-lying ground near the Save in the pleasure ground, where the late Prince of Servia was so treacherously murdered.

The majority of the cases in the Belgrade hospitals were very slightly wounded, a considerable proportion being wounded in the left hand, and often in one finger. Indeed, in one hospital a large ward was appropriated to these cases, and was quite full. The number of operation cases was very limited. I saw a few amputations, probably of necessity, but otherwise scarcely anything of surgical importance. One case serves to illustrate the antipathy to operation entertained by the Servians, a prejudice which is, however, not exclusively confined to them. I found in the hospital of the *Serbische Frauen Verein*, a nice-looking lad of eighteen years, with a gunshot fracture of the head of the humerus, caused by a fragment of a shell. A considerable wound existed on the front of the joint; the head of the humerus was shattered; some fragments of bone were quite loose; counter openings had been made behind; the upper end of the broken shaft was drawn up, and pressing against the brachial plexus, thus causing excessive suffering. The suppuration was profuse, yet neither the poor lad himself, nor his father and mother who were with him, would hear of anything being done. His mother, who has three other sons in the war, the youngest only fourteen, is a Montenegrin. She never leaves her son's side. It was a sad and painful sight. I said, through the doctor as interpreter, all I could think of to influence her determination, but she was perfectly unmoved by our entreaties. There were several other cases of gunshot injury to joints which demanded interference, but for which the surgeons could do nothing but wait and watch. In this hospital I saw an example of that *rara avis* in either Servian or Turkish hospitals—a wounded enemy. A Turk who had received a flesh wound of the thorax was being carefully nursed and tended, and shown with much pride to everybody. I was told there were many wounded Turks in the Servian hospitals, but this was the only one I saw. He seemed much amused at the interest taken in him, and was at the time of my visit almost convalescent. Another case of interest was one where a ball had entered the middle of the right cheek, and, traversing the palate, had emerged beneath the mastoid process on the opposite side. The wounds were looking well, and the patient had not experienced an untoward symptom. How the great vessels in the neck escaped it is difficult to imagine. In the same hospital was a curious mouth wound. The bullet had entered the cheek just behind the right angle of the mouth so as to carry it away; it then traversed the upper surface of the tongue, deeply furrowing it, and, after carrying away portions of the alveolar borders of the lower jaw, emerged, traversing the other angle of the mouth, and deeply grooving it likewise. A very remarkable case was a gunshot wound traversing the upper and back part of the neck, close beneath and behind the mastoid processes from side to side. The surgeon believed the spinous process of the first cervical vertebra had been fractured. Consecutive and almost complete paraplegia had subsequently, but slowly, ensued upon the injury. The man's head was carefully supported by an apparatus. This case was in the military hospital of the reserve.

We found that in Belgrade there was no dearth either in respect of the number of surgeons or of surgical necessaries, but the hospitals left much in their internal arrangements to be desired, with the exception of the two last-mentioned. Here, as everywhere else, the Russian element predominated; they it is who have furnished, not only the officers, and to some extent the soldiers, of the army, but in every town numbers of Russian doctors, and Russian women accompanying them, are to be found, only a few of them, however, possessed of any very considerable professional experience or position.

Having seen all that was to be seen in Belgrade, I was anxious to reach Mr. McKellar and his party in Alexinatz, and bring them such substantial aid in the shape of surgical material as I felt sure they would require and make good use of. Accordingly, in the early morning of August the 31st, Colonel Loyd Lindsay and I set out for the front, and after twenty-five hours' very hard travelling we reached Alexinatz at eight o'clock on the morning of September 1st. Along the road we met numerous stragglers, and also convoys of wounded in bullock carts, but the number of men with wounds, generally of the left hand or fingers, was something surprising; we passed them in ones, and twos, and threes, and I counted one batch of eight soldiers all wounded in the hand. I counted up to one hundred men

in the course of seven or eight hours whom we passed all similarly wounded in the fingers or hand, and then I ceased to count them any more. The journey was a melancholy one, the houseless villagers camping out along the road, with the few goats, sheep, dogs, and articles of furniture they had been able to bring with them.

At Brszan, the first halting-place we came to, we found two men lying on the roadside. One was wounded in the leg, and had evidently walked as far as he could; the limb was much swollen and inflamed, and the poor fellow was suffering agony; the other was cold, half collapsed, and smeared over with his own excrements, in the midst of which he lay. The villagers stood looking on, and did nothing; yet there was an empty house close by with stretchers in it, where, at any rate, the poor creatures might have lain with some comfort, and sheltered at least from the broiling sun. The apathy of these half savage, wholly ignorant villagers resembled the action of wild beasts, who drive their sick or wounded companions out of the herd. We had difficulty in making these people bring the two soldiers under cover. I assisted with my own hands, gave the one some medicine, and made a free incision into the tense limb of the other. I saw this man later in a hospital in Semendria doing pretty well. It is probable the succour rendered him at Brazan saved his life. The astonishment these villagers betrayed when they saw we were really seriously interested in the poor men was quite impressive in its way.

As we got near Alexinatz we heard the first cannon-shot fired of what afterwards proved an important battle. In the town there were not six wounded men, although there had been six days' fighting just before; all had been immediately sent to the rear with the exception of a few officers who were waiting for a little better means of transport. This was not done merely because Alexinatz was hygenically a most unsuitable place for sick and wounded men, but because at that time a Turkish advance might at any time cut the place off. Indeed, as the result of that day's fighting, there was no reason why the Turks should not have occupied the town except the rule they seem to act upon of never following up their own victories. This at least was the opinion we formed in Alexinatz, and that it was not an unfounded one we subsequently learnt in the Turkish head-quarter camp from General Kemball, who thought the Turks had committed a gross military mistake in not entering Alexinatz that night; so far as we could see there was nothing whatever to prevent them. Had Alexinatz been then taken this wretched war might have been brought to a much more speedy conclusion. Almost immediately after meeting McKellar and the rest of the party, the chief surgeon of the army, Dr. Vladan Georgovitch, rode in with intelligence that the engagement would be a severe one, and that the surgeons were to proceed to a certain place appointed for them as a Verband-platz. I busied myself with the wounded who very shortly began to arrive, and after a time went out to some high ground from which a panorama of the battle-field could be seen. It was an interesting sight, for the movements of the contending forces and the direction and results of their fire could be easily made out. We saw one village after another burned, we saw the Turkish batteries from time to time steadily advancing to other positions, and the Servians as steadily retreating, and as dusk came on we witnessed a brisk musketry encounter so close to us and so well up to the entrance of the town, that it appeared to us that the only possible result of the day's fighting would be the capture of Alexinatz. In the ugly rush that must follow we had no inclination to participate, so returning to the town we ordered our tired horses and soon after beat a retreat. McKellar had before this joined us, and was of much assistance, but the day's experiences have been already recited by a graphic pen in the columns of *The Times*, so I need not recapitulate. At Rasanj, a few miles from Alexinatz, McKellar and I remained, and were shortly after joined by the other surgeons, while the rest of the party continued their journey. Rasanj was to be the future head-quarters of the English ambulance. We spent the remainder of the night uncomfortably enough in a wretched outhouse.

Next day I went over a large Russian ambulance. The greater portion of the patients were in a barn-like structure, the front of which was filled in with branches of the dwarf oak which abounds in the district, and whose dried foliage formed a screen through which light and air penetrated. The floor was earthen; the beds wooden, with straw palliasses to lie upon. The most interesting case here was one of supposed injury to the popliteal artery, followed by gangrene of the lower limb. The sufferer was a man of five-and-thirty years, a Servian peasant. The bullet had entered exactly the middle of the ham, and there was no wound of exit. No pulsation could be felt in the vessels in the leg, which was much swollen and quite cold. The injury had occurred two days previously. I believed I could discover fracture of the femur, into the knee-joint probably, as it was distended with fluid; but the Russian surgeon thought otherwise. Up to the middle of the thigh the interspaces of the muscles were distended by extravasated blood. There could be no doubt of the injury to the vessels. I advised immediate amputation, and the Russian surgeons expressed a desire that I should perform the operation. I performed a modified circular operation in the thigh under chloroform, Mr. McKellar, and Messrs. Hume and Hare, two of my former dressers at St. Thomas's Hospital, most efficiently assisting me. On opening the injured parts, I found the bullet had carried away half of the right lateral aspect of the popliteal artery, the wound being a cleanly cut oval hole, whose longest diameter was five-eighths of an inch. Through this the blood had been forced into the cellular tissue, so that the upper part of the leg and as far up as the middle of the thigh was filled with a large quantity of extravasation. The bullet had then entered the lower part of the femur and caused a T-shaped fracture of the condyles into the joint, which was filled with blood. The patient when I last heard of him was doing quite well, and I trust may recover. I preserved the femur and the bullet, and they promise to make an interesting preparation. The wounded artery I had no means of preserving. It is, I consider, necessary in nearly all cases of amputation for gunshot injury—that is, in thick, muscular, and healthy limbs—to perform the pure circular or skin flap method. The preservation of the muscular tissue leads to great inconvenience. The muscles are so bulky that flaps of inordinate length are required to procure sufficient cover, and even then great muscular masses protrude from the wound, or between the edges of the flaps, when one tries to close them, in a very uncomfortable way.

The following day I left Rasanj to return to Semendria, to see and confer with Baron Mundy and Colonel Loyd Lindsay with reference to establishing an ambulance hospital in the rear. On my return journey I visited the various ambulances along the road, and in the different villages; with scarcely a single exception, all were in charge of Russian surgeons and nurses. For the most part, they were well equipped and provided, although in many cases the buildings were anything but well suited for the purposes of a hospital. As a rule, the cases were comparatively unimportant, or at least surgically uninteresting. The best ambulance I met was one at Tjuprija, for eighty beds, which had been specially constructed of wood. It was in all respects excellent except the ventilation, and there, as elsewhere, the dread of *courants d'air* was a terrible *bête noire*. The only ambulance I did not see, as it was too far out of my way, was the one directed by my friend Dr. Reyher, of Dorpat, which Baron Mundy praised much, and I am sure deservedly, as whatever Dr. Reyher would undertake he would be sure to do well. This gentleman's name is, I know, familiar to many of our profession in London. In Semendria I saw two cases peculiarly interesting. One was a considerable gunshot depressed fracture of the anterior superior angle of the right parietal bone. The depression amounted to more than half an inch; but when I saw the patient ten days subsequent to the injury, there had been no symptoms. The surgeon thought I might blame him for not having trephined; I very much commended him for not doing so, and not yielding to his inclination to operate. I had, however, some difficulty in persuading him to syringe out the wound with some cleansing lotion. He was afraid he might thus injure the brain, and preferred getting the man to hang out of bed with his head downwards, and so permit the very bad-smelling pus to escape from the rather deep wound. I took the responsibility of assuring him no harm would accrue if he syringed the wound two or three times daily. Another case was one in which the bullet entered through the right temple behind the eye, and was believed to have traversed the posterior part of the floors of

both orbits. The vision in the right eye was impaired, but the left eye was in a condition of exophthalmos, and the cornea opaque. The direction and depth of the wound appeared to indicate that the bullet, which had not emerged, lay somewhere behind the left eye, in which it had excited destructive inflammation.

I was most anxious that Mr. McKellar and his companions should have the opportunity of treating cases for secondary operation, and Baron Mundy promised to give them the selection of the best. They had already amply distinguished themselves for their bravery and skill in the Verband-platz, where they had encountered risks innumerable. Their reputation was sufficiently endorsed by the fact that the Russian officers and soldiers, as well as the Servians, begged they might be sent to the English surgeons.

On my return we visited Lubicevo, near Poseravac, where there is a beautiful park belonging to Prince Milan. We found it a place after Baron Mundy's own heart, where an ambulance very similar to the beautiful model one erected at St. Cloud by the Baron might have been installed. We were charmed with the beauty of the spot. It was within half an hour of Poseravac, on the main road for "evacuation" from Alexinatz, an hour and a half from Dubrowitza, a steamboat station on the Danube. The fear Colonel Loyd Lindsay and I had was that it would be impossible to get the needful buildings erected in a sufficiently short time, and at that moment everything pointed to the speedy conclusion of the war. We went, however, on the following day to Belgrade to confer with the authorities there, and with Mr. White, the British Consul, to whom and to Mrs. White all English people have reason to feel most grateful. The Minister of War, Dr. Petrovitch, and Mr. White were all of opinion that our ambulance should be established in Belgrade, and we therefore, perforce, abandoned Baron Mundy's scheme. I drove with the chief surgeon round various places, and finally selected as the most suitable a series of schoolhouse buildings containing many excellently ventilated and well-lighted rooms. They were to be equipped for 100 beds, and extended, by means of baracken, to 150 if necessary. The furniture and everything needed was already on its way; in fact, two days later most of it arrived, with Dr. Laseron. Mr. McKellar is now at the head of this institution, which, as a well-merited compliment to Mrs. White, was named the "Katherine Hospital." It has been filled with patients, and will do credit, I believe, to the National Society as well as to those entrusted with the working of the hospital. Some of the surgeons attached to the Society have been told off to work in the hospital, while the rest continue their arduous duties in the front, where recent engagements have given them further and most severe work.

Having now, with Colonel Loyd Lindsay, completed the arrangements which the Society was willing to undertake in aid of the Servian sick and wounded, Colonel Loyd Lindsay and I, with the rest of the party, and the four surgeons destined to serve in Turkey—Messrs. Leslie, Pitts, White, and Barker—started for Widdin. We arrived there on Sunday evening, Sept. 10th, after about twenty hours' steaming, through some of the most picturesque parts of the Danube, the Kazan pass, where the great river, which only a short distance above resembled a large lake more than a mile and a half broad, and studded with numerous islands, narrows down to a width of 180 metres, and is supposed to be 60 metres deep, as it seethes in many whirlpools through the gap in the Carpathian range. On each side cliffs rise to a height of 1000 to 2000 feet, while above them we could distinguish with our glasses several eagles slowly soaring in mid sky. The holes cut in the side of the rock for Trajan's military road seem as sharp as ever. Farther down we passed the Iron Gates, which are really a series of rapids caused by rocks in the now shallow stream. Late at night we landed on Turkish soil, and put up at the best, which was but a very indifferent, hotel in the place. We found the hospital in Widdin not very clean and ill ventilated, the Turkish notion of ventilation being apparently to open the windows, or some of them, twice daily, night and morning, for half an hour each time. There had been, up to the time of my visit, about 400 wounded in Widdin, chiefly slightly wounded or convalescent cases. There had been no recent cases since the engagements before Saitchar. In the Widdin Hospital there had been in all only two cases of operation—one was an amputation of the leg, the other that of a finger. There were, however, several cases of joint injuries. I saw some of the elbow and shoulder requiring excision, but the surgeons say the Turkish soldiers will not listen to a proposal to operate. However indifferent, according to our notions, the sanitary condition of the hospital in Widdin might be, the mortality was but small. There had been amongst the 400 wounded only 10 fatal cases; 3 deaths took place from pyæmia, 3 after penetrating wounds of the breast, 2 from secondary hæmorrhage, one being a flesh wound of the thigh, 1 a fracture into the elbow-joint. Two other cases of death arose from exhaustion. I saw no Servian wounded at Widdin, nor could I hear that more than four had been received since the beginning of the war. Dr. Colonel Asiz Bey is the principal medical officer, and is assisted by a very numerous staff, some forty doctors I think; most of them spoke French. Asiz Bey told me that in Widdin they required no stores, that the hospitals were supplied with every present requirement, but it was probable they might later want something, and if we would leave them a portion of the stores they would, even if not requiring them themselves, see to their distribution to those points where there might be a need for them. We gladly accepted this offer, and started with our surgeons and the rest of our stores next morning, September 12th, for the head-quarters of the Turkish army at Nish. This journey occupied three days in the wretched conveyances, drawn by still more wretched horses, of the country. We had no food but what we were provident enough to bring with us, no place more satisfactory to rest an hour or two in than a hay-loft. We had to pass close to the Servian frontier, and, indeed, part of the time encroached on Servian territory. We saw the traces of battle, and passed through many of the burnt and deserted villages. At last we reached Nish, thoroughly tired out. The hospitals there are larger, but otherwise a repetition of those in Widdin. The system of "evacuation" is carried out here just as on the Servian side, and the wounded and sick are sent on by bullock-carts to Pirot, Sophia, Adrianople, and even to Constantinople. Nish is a low-lying, unhealthy place, very rife with malaria and fever. The wounded are kept there as short a time as possible. Having to proceed to the camp before Alexinatz in order to make arrangements for our surgeons serving there, I was unable to give more than a cursory glance at the two large hospitals in Nish, but was informed that they had received up to that date some 2000 wounded, and that the number of wounded in the entire district from the beginning came to about 3000. Amongst these there had been only five wounded Servians so far as I could learn.

On Friday, the 15th, at five o'clock A.M., Colonel Loyd Lindsay, Dr. Leslie, and myself, started for the camp. A most interesting journey it proved to be, for it was over the very ground on which we had witnessed a fortnight before the battle of the 1st September from Alexinatz. We had to pass close to this town, and could see the house we occupied in it, the height from which we witnessed the battle. I recognised even the tree whose shadow I had found most agreeable on that scorchingly hot day. We were now under the range of fire of a couple of Servian batteries who, fortunately for us, considered our party beneath their notice; but we heard in the camp that they were often in the habit of firing at the people passing along this road, near which we saw the Turkish outposts in trenches with their muskets levelled. At the camp I had a long interview with Dr. Voulcovitch Bey, the principal medical officer at the Verband Platz. He hailed with delight the offer of the services of four English surgeons, said he should provide tents for them beside his own, and treat them with every consideration and kindness. Since then I have heard from Dr. Leslie, who has brought all the stores to the front, and pitched two hospital tents, that there have been two serious engagements, and that he and the rest had been working day and night assisting the wounded.

We started on our way towards Constantinople on Saturday 16th, in the early morning, the first stage being Pirot, a picturesque fortified town, outside the walls of which was a large encampment. On the road thither we met many Asiatic troops, easily distinguished by their bright clothing and multitude of weapons, a brace of muskets, two pistols, a sword and dagger being an ordinary equipment. Many of these men were very handsome. Indeed the stature and physique generally of the Turkish regular troops appeared

to me superior to our own. The soldiers we met going to the front, and they were several thousands, were veteran troops, men averaging at least thirty years of age; they live simply, consume no spirits, those in camp thriving apparently on biscuits, with a little meat only once or twice in the week. When the cold weather and the rains come on, they will, I fear, suffer terribly, as all the villages and other cover which might have been available for the troops have been improvidently burnt, and tents are scarce. In Pirot there were forty wounded. Sophia, which we reached on Sunday morning, is a typical Turkish town, and there was much to interest one in the place and people; it lies very high, and is considered a most healthy place. Dr. Takvorian is chief of the military hospital; it contains three hundred beds, at present occupied by sick and wounded in equal proportions; the wards were overcrowded, and the ventilation very imperfect, but the place was cleanly, and kept with a certain amount of comfort. Whilst there a convoy of sixty wounded arrived from the front; they lay, after leaving the bullock-carts, stretched about the courtyard in various attitudes of fatigue and suffering. They had been immediately served with a ration of food. There were no self-mutilators amongst the Turks. These men were soldiers, while the Servian stragglers we met in such numbers coming from Alexinatz were mere peasants, who wanted to do anything rather than fight, and shot themselves, and their officers sometimes also, rather than do so. The colonel Dr. Fano Bey, has the direction of the Hôpital Hirsch, named after the wealthy Austrian Baron, Concessionaire of the Turkish railways, at whose sole expense it has been erected and maintained. Dr. Fano deserves the utmost credit for the manner in which he has transformed a miserable Turkish khan into an elegant ambulance hospital. The beds, one hundred in number, and their equipment, leave nothing to be desired or criticised. There was a first-rate kitchen, with all the most approved culinary arrangements, a laundry, a model apothecary's shop, an operating room, store-rooms for linen, surgical appliances, and other stores, officers' rooms, plainly but sufficiently furnished. The wards were the sleeping apartments of the khan, thoroughly cleansed, and looking fresh and pleasant. They were on the ground- and first-floors, around a large courtyard, and on the first-floor was a spacious verandah all the way round. The doors of the wards during my visit were all open, but the windows were not, and where I should have placed two or three beds, four or five or six were placed. Here, again, it was a question of *courants d'air*. The windows were generally closed. I inspected some of the wounds, and I am constrained to say they had a foul smell. Neither here nor in the military hospital did I see any cases of special surgical interest, and there has been no Servian seen there since the beginning of the war. The doctors urged the great desirability of further hospital accommodation. They said they had to "evacuate" many cases too rapidly, and to less desirable stations. Colonel Loyd Lindsay and I decided, from all we heard, that this would be the most desirable place to establish a reserve hospital. It was sufficiently near the front, it was very healthy, and the beds were urgently needed. A most suitable building for 100 beds was found, after considerable seeking, in the now almost disused offices of the Railway Commission. We had previously inspected two khans, resembling the one transformed by Dr. Fano, which for filth, vermin, and foul smell utterly transcend my powers of description. It only served to enhance my admiration for Dr. Fano's work. The smell in these Turkish khans, and indeed in several of the Turkish houses we entered, can only be likened to that of an abominable privy. It is intolerably disgusting. We arranged that the bedsteads, which are of wood, should be made on the spot, of the simple pattern already in use, and that as much as possible for the hospital purposes should be procured in the town. Dr. Takvorian engaged to do this, and to procure sheets, night-dresses, slippers, mattresses and palliasses, &c., whilst we promised to send 100 blankets from Constantinople, as these could not be obtained in Sophia. We also determined to send some of the English doctors, if possible, who had arrived in Constantinople, in the pay of the Turkish Government, and who would naturally prefer to work in an English hospital. Three have since been detailed for this duty.

I raised an amount of indignant surprise in a young Arab physician, of very much more than ordinary intelligence, which was quite amusing. He listened to the number of beds I proposed to allot to each room in our newly-acquired hospital with an air of blank astonishment, and at length impetuously exclaimed, "But recollect, my dear Sir, this is not an experiment in hygiene we are going to try; we want to provide accommodation for wounded men." Having completed these arrangements, we started once more, and, after a wearisome drive through a wild but beautiful country, reached civilisation once more in the shape of the railway station at Tatar Bashardjik. It was a real pleasure to get rid of our armed attendants, the two or three mounted zaptiehs or gendarmes who had hitherto kept watch over us. That night we spent luxuriously on the benches in the waiting-room of the station, rejecting without hesitation the allurements of the khan, and next morning started for Adrianople, where we had to spend the night, during which the Turkish trains do not run. In Adrianople there is a hospital of 300 beds, containing at that time 150 sick and wounded. I was shown a Circassian soldier wounded three weeks before in the foot, and sent from one hospital to another in the rear without the bullet having been discovered or extracted. The foot was much swollen, and some puffiness beginning about the ankle. The wound was on the upper and outer side of the dorsum of the foot, and, on obtaining a probe, I was able to localise the foreign body, firmly lodged between the astragalus and os calcis. No sooner had I done so than the patient betrayed the liveliest interest, and, taking the probe from my hand, re-introduced it, and struck the bullet himself repeatedly in a way which convinced me he was satisfied he knew its whereabouts. I had now some trouble in persuading the Turkish surgeon of the propriety of its immediate removal, and in convincing him that cutting upwards through the sole of the foot was not the best way of doing so.

In a small ward close by I was told there was a lunatic, but I only found a poor fellow dying from the brain inflammation following a sabre wound on the head, which, so far as I could make out, had exposed but not fractured the bone. After this visit, which was somewhat protracted, I got back to the khan in the dark, to sleep as well as the creatures in previous occupation of my bed would allow. It was the first night of the great Turkish festival of Ramazan, and all over the town firearms, often loaded with ball, were being discharged, but we got home all safe, and next day started for Constantinople, where my narrative may fitly be brought to a conclusion.

THE "INTERNATIONAL": A NEW MICROSCOPE BY M. PILLISCHER.

THIS microscope is intended to supply the want that English observers have long felt—viz., that of obtaining an instrument which, whilst portable and cheap, shall yet be capable of general pathological application and of fulfilling all the other purposes for which a good microscope is needed. Hitherto, with a few marked exceptions, all such microscopes have been supplied from the Continent, and this plan has certain disadvantages: for, in the first place, the buyer has no opportunity of testing the instrument before he purchases it; secondly, foreigners are not, as a rule, prompt in their consignment of goods, and the consignee has sometimes, to our knowledge, had to wait for months, sometimes to his great inconvenience, and always at the expense of his good temper, unless specially endowed with patience; and lastly, if any alteration or repair is needed, the whole instrument has to be sent abroad again, and the same vexatious delay again experienced. M. Pillischer's instrument may legitimately be compared with Hartnack's No. 8 microscope, which is sold at the same price, £7 10s., and is at the same time one of the best known and most universally used instruments of a first-rate maker. For this sum a microscope is obtained of such a height as to be easily worked when standing at an ordinary table, furnished with two objectives, two oculars and a condensing lens. The main tube is capable of being lengthened to double its ordinary length by means of a draw tube, thus greatly adding to the magnifying power. So far both instruments

are alike. In regard to the adjustment, however, M. Pillischer's instrument is furnished with both the coarse and the fine; the coarse adjustment being effected both by the rack and pinion common to most English microscopes, and by the draw tube. This, we think, is a decided advantage, since for beginners and those who are not very dexterous with their fingers the rack and pinion saves a great amount of destruction of cover-glasses and specimens, as well as scratches to the objective; whilst, for more experienced observers, or for those who have been accustomed to use foreign models, the sliding draw tube is always available. Another advantage of the rack and pinion is that it allows the distance of the objective from the stage to be considerably increased by raising the draw tube, thus permitting very low powers to be employed. Both Hartnack's and Pillischer's microscopes are furnished with the micrometer screw fine adjustment, which is of course indispensable when the higher powers are in use. The main tube in both is further constructed with a hinge, so that it, as well as the stage, can be placed at right angles to the stand; this is requisite when it is desired to make any drawing of preparations by means of the camera lucida. The instrument, as a whole, is fairly firm and steady, though it might be made more so if the stand rested entirely flat on the table, instead of on three points of support, and the base were made a little heavier.

The objectives supplied by M. Pillischer are two in number, with a focus respectively of $\frac{2}{3}$ and $\frac{1}{4}$ of an inch, two very useful powers, and nearly equivalent to Hartnack's No. 5 and 7, the $\frac{1}{4}$ being slightly stronger than the 5. On the other hand, their angular aperture is slightly less, and the illumination is consequently slightly inferior. As in Hartnack's instrument, the oculars are two in number, called respectively Nos. 2 and 3. The combinations magnify from 50 to 420 diameters, whilst the corresponding Hartnack ranges from 75 to about 500. We have examined several test objects and pathological preparations, and find that with the objective $\frac{1}{4}$ (taken at random from several submitted to our inspection), ocular 3, and tube drawn out, M. Pillischer's instrument is at least equal, if not somewhat superior, to Hartnack's in point of penetration and definition, whilst the illumination is slightly inferior. The illuminating apparatus consists of a small concave mirror and diaphragm, which revolves, and is pierced with different sized holes. On the whole we can conscientiously recommend M. Pillischer's microscope to all who want a really useful instrument, whether for histology or pathology. The instrument is very portable, packing into a box 10 by 6 by 4 inches, without unscrewing any part, and weighing only a few pounds.

THE FIFTH ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD.—PART II.

THE second part of the Report under consideration summarises the administration of the laws affecting local government and public health, and commences by explaining shortly the provisions of the Public Health and Sale of Food and Drugs Acts, both of which have been described in detail in THE LANCET. In connexion with the former, it appears that during 1875 there were 64 additional appointments of medical officers of health sanctioned by the Local Government Board, 18 having been made by rural, 45 by urban, and 1 by combined authorities. During the same time, 9 inspectors of nuisances were appointed by rural and 44 by urban authorities. Ten combinations have terminated during the year, and, as a result of the collapse of these combinations, 26 new medical officers of health and 9 inspectors have been appointed. The total number of appointments sanctioned by the Board since the Public Health Act of 1872 became law is, as regards medical officers of health, 807—viz., 389 by rural, 347 by urban, and 71 by combined authorities; as well as a total of 808 inspectors of nuisances. These statistics, however, represent only those appointments in which a portion of the salary is paid out of the parliamentary grant, and it appears that this grant amounted last year to a total of £55,119. The Report recites that the growing and practical interest in sanitary matters is shown by the fact that since the passing of the Public Health Act of 1848 and the Sewage Utilisation Act of 1867 a total sum of £15,600,131 has been sanctioned and advanced as loans for sanitary purposes in urban districts.

Recurring to the Sale of Food and Drugs Act, the Board have, during the year, approved of the appointment of an analyst in ten cases, and 122 authorities have made appointments under the Act, 37 of which are in counties, 46 in boroughs, and 39 in district wards and vestries in the metropolis.

A vast number of bye-laws, framed by local authorities, have been revised and confirmed at Whitehall. These include 42 separate series of regulations for the removal of river refuse, cleaning of closets, &c., 54 as to prevention of nuisances arising from accumulation of snow, filth, &c., 31 referring to common lodging-houses, 69 referring to new streets, a sufficiency of space about, and ventilation of, buildings, and the closing of buildings and parts of buildings unfit for human habitation. There were also approved miscellaneous bye-laws relating to hop-pickers, slaughter-houses (already specially noticed in THE LANCET), hackney carriages, public bathing, &c. With regard to bye-laws generally, it appears that the Board, having, from the experience of the past three or four years, gleaned sufficient materials for the purpose, are now engaged in the compilation of a model code, which may, we suppose, be looked for in the course of the next twelve months.

A total of 183 special inquiries have been made by the general inspectors of the Board, chiefly on matters relating to sewerage, drainage, and water-supply; and 406 inquiries have also been instituted upon application by various sanitary authorities for official sanction to loans. In 45 cases provisional orders have been made or renewed constituting port sanitary authorities, but as the work is deemed to be, to a certain extent, experimental, it has not been considered expedient to confirm these orders except in the case of Liverpool, the corporation of the town being there permanently constituted the port sanitary authority, and in the case of London, where the City Corporation is so constituted by a special clause in the Public Health Act, 1872, the Board merely assigning it powers.

References are made, of course, to the Artisans' Dwellings Act, the Explosive Substances and Alkali Acts, and to steam whistles. The first of these has already received ample notice in our columns, and the other Acts do not call for special comment. In reviewing the progress made under the provisions of the Metropolis Water Act, 1871, it is reported that in 1875 considerable progress was made in various parts of London in providing an efficient constant supply of water. "Several of the companies are now giving constant supply in courts and alleys by means of stand-pipes with self-closing taps; and in the districts of those companies which are extending a constant supply a marked improvement has taken place in the quality of the water consumed by the small householder, which thus reaches his house in the same condition as it leaves the company's mains." (This is a *verbatim* extract from Major Bolton's report.) Although, however, no less than 670 miles of streets exist with mains continually charged, and upon which hydrants could at once be fixed, only 2622 hydrants are at present provided by the companies; and so, of course, polluted cisterns are still the rule rather than the exception.

And here we propose to close this *précis* of a very important report. Mr. Sclater-Booth, indeed, gives seven brief paragraphs (at the tail of the document) to the Medical Report—on vaccination, medical inspections, hospital accommodation, special inquiries, cholera, and plague. Our readers will find Mr. Simon's concluding work fully noticed in preceding columns of THE LANCET during the autumn of the current year, and it is proper that scientific work should be reviewed apart from administrative particulars, in this somewhat peculiarly constituted department of the State, which is rapidly becoming as hydra-headed as its opposite neighbour at Whitehall, the Board of Trade.

THE Cockermouth Rural Sanitary Authority have combined with the Cockermouth and Keswick Local Boards for the appointment of medical officer of health at a salary of £339, of which £300 is to be contributed by the Rural Sanitary Authority.

NEW STUDENTS.

UP to the present date the following is a list of new entries at the various metropolitan medical schools:—St. Bartholomew's, 132; Guy's, 98; University College, 81; London, 48; King's College, 32; Middlesex, 45; St. George's, 31; St. Mary's, 27; Westminster, 12.

Amongst the provincial schools, 42 new students have entered at Owens College, Manchester; 32 at Leeds School; 23 at the Royal Infirmary, Liverpool; 22 at the Sheffield School; and 17 at the Bristol School.

ANÆSTHESIA IN OPERATIONS ON THE EYE.

To the Editor of THE LANCET.

SIR,—I have read with much interest Mr. Hodges's letter in your last issue, as I have more than once observed cardiac syncope immediately following excision of the globe.

The only death from chloroform it has been my misfortune to witness was several years ago, when fatal syncope supervened on removal of eyeball. No cardiac disease was discoverable at the post-mortem.

A short time since I excised the globe of a boy, aged five, for glioma. Chloroform was administered. Contrary to my directions, food had been given him a short time before the operation, and at first he was disturbed with vomiting, but afterwards took the chloroform well. No sooner, however, was the optic nerve divided than extreme pallor of face was noticed, with suspension of respiration and stoppage of heart's action, and so decided was it that two persons present simultaneously cried out, "He is certainly dead." He was immediately caught up by the legs and inverted, the tongue drawn forward, and artificial respiration had recourse to. After what seemed a long time to me, he made a gasp, and, to my great relief, this was gradually followed by a return to natural breathing, and he made an excellent recovery.

May not the syncope in these cases be dependent on shock caused by the division of such a nerve so near the great nerve centres? Ether being a heart stimulant, syncope from this cause would, of course, be less likely to occur than when chloroform was administered, the depressant action of which is well known.

I am, Sir, yours faithfully.

Sheffield, October, 1876. SIMEON SNELL.

To the Editor of THE LANCET.

SIR,—In your issue of the 7th inst., I see a letter from Mr. Hodges, of Leicester, on the above subject, commenting upon a case of cardiac syncope which occurred in the practice of my friend Dr. Charles Bell Taylor (not Dr. Bell, as stated in that letter). The idea suggested by Mr. Hodges as to a connexion between cardiac syncope and division of the optic nerve is not borne out by my experience in this operation. I have administered anæsthetics for Dr. Taylor in, I think, considerably over twenty cases of extirpation of the eyeball, and I have never seen such symptoms developed. Only yesterday I was present at an operation of this nature, and no change in pulse or appearance took place on division of the optic nerve, though carefully looked for. I believe the cardiac syncope to be due rather to the anæsthetic used than to any reflex action following the division of the optic nerve. Although I very frequently give anæsthetics, I rarely now use chloroform. Ether I find to be much safer, although not absolutely safe; there are objections to its use, but they do not lie in the direction of syncope. In some cases I commence with the mixture of alcohol, ether, and chloroform, and as soon as the patient is quiet continue with ether.

When I gave chloroform exclusively, I often met with cases of cardiac failure, more or less severe; though I am happy to say in no case did it terminate fatally. Since I have chiefly used ether I have met with no such case, and I have frequently had to keep patients under its influence for long periods.

Mr. Hodges' idea is well worth attention, but I believe it will be found that the effect is due, as I before said, rather to the agent used than to any effect produced by division of the nerve.

I am, Sir, yours faithfully,

BEVERLEY R. MORRIS, M.D.,
Physician to the General Hospital, Nottingham.

Nottingham, Oct. 11th, 1876.

BIRMINGHAM.

(From our own Correspondent.)

A SUM of £500,000 is at once to be borrowed by the Town Council from the Bank of England, and it will be applied in payment of the purchase-money for the properties required for the Improvement Scheme, so that the authorities have evidently lost no time in carrying the proposed reform into effect. With a view of obtaining greater facilities for raising loans, and to enable them to borrow at a lower rate of interest, the Council propose to convert all the corporate debt into one stock, and to substitute stock certificates for the present mortgages.

Walsall, following in the footsteps of Birmingham, has decided on carrying out an improvement scheme, which will involve the pulling down of many old buildings, and the substitution of better drained and more commodiously built houses for the working classes.

Measles has broken out at the Birmingham workhouse. There are already eighteen cases, and the guardians are anxious to get them into the borough hospital. The Health Committee of the Corporation, however, decline to receive *pauper* cases at the borough hospital, so that it is incumbent on the guardians to at once provide a building in which they can without delay isolate any fresh cases that may arise. Saltley having recently been formed into a separate district, a local Board of Health has been elected, to the chairmanship of which Dr. Anthony, the consulting physician of the Birmingham Dispensary, was very properly inducted by general consent at the first meeting.

The Coroner has again been complaining, and with justice, that the mortuaries which the Town Council agreed to erect several months ago at the various police-stations, have not yet been commenced. Delay in such a matter seems perfectly unreasonable.

The authorities of the Midland Institute have added a new subject—Biology—to the list of penny science classes, and Mr. Lawson Tait has been appointed teacher of the class. Quantitative analysis and technical chemistry are also to be taught in the laboratory by competent professors.

The clinical work of the hospitals was commenced by a valuable and interesting introductory address from Dr. Sawyer, in which he dwelt on the advantages presented to the students by the amalgamation of the General and Queen's Hospitals, by which means they now had the opportunity of watching the practice of twenty physicians and surgeons, who were responsible for the charge of 400 beds, and the annual care of some four thousand in-patients and forty thousand out-patients. He insisted on the importance of the students attending regularly and systematically to the work of the college and hospitals, and availing themselves of the numerous dresserships and clerkships which were thrown open to them. Prizes were distributed to the following students:—Senior Medicine (1) H. W. Thomas; (2) G. A. Cardew. Junior Medicine, G. J. Lloyd. Junior Surgery, G. J. Lloyd. Clinical Midwifery, H. W. Thomas.

The annual meeting of the Midland Medical Society was held on October 4th. The report of the council detailed the various changes which had taken place in the constitution of the Society, and announced an increase in the numbers of the Society from 116 to 220.—The clinical prizes of the Society had been well contested, and the successful candidates, Messrs. Palmer and Davis, showed great ability. The adjudicators on the Cheshire prize for the best essay "On the value of Venesection in the treatment of disease," reported that the best paper received was written by Dr. Francis Warner. Dr. Russell announced his intention of offering a similar prize for the best essay "On the value of Mercury in the treatment of Inflammations past and present."

Mr. Berry, F.R.C.S., was elected president for the ensuing year, Mr. Harmar was re-elected treasurer, and Mr. Thomas and Dr. Savage were also reappointed hon. secretaries. Dr. Robert Barnes and Dr. Milner Fothergill, also many of the local members of the Society, have promised papers for the ensuing session.

Birmingham, October 9th, 1876.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Oct. 5th:—

Brett, James, South Parade, Leamington.
Browne, Henry, Lidford-road, Stoke Newington.
Messum, Julian A. Broker Galsworthy, Grasmere Villa, Dulwich.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Henry W. B. Gamble, St. Bartholomew's Hospital; Richard Hy. Grimbly, St. Thomas's Hospital; Edgar Thurston, King's College.

DR. RICHARD HENRY POPE has been placed on the Commission of the Peace for the County Donegal.

SANITARY SCIENCE CERTIFICATES, CAMBRIDGE.—The following gentlemen obtained Sanitary Science certificates at the recent examination:—C. W. S. Deakin, M.R.C.S.; J. C. Leach, M.R.C.S.; H. F. Parsons, M.D.; J. F. W. Tatham, M.D.; A. Tomes, M.R.C.S.; W. Williams, M.D.

THE Bristol Royal Infirmary, which has been under repair during the past twelve months, was reopened on the 3rd inst. Temporary premises were in use while the infirmary was closed. The Bristol Royal Infirmary is one of the largest and oldest hospitals in the West of England; it was instituted in 1735, and contained 272 beds when it was closed for repairs.

PRESENTATIONS.—On Monday, Mr. Wadsworth, assistant medical officer of Shoreditch Infirmary, was presented by the officers and inmates of that establishment with a gold watch and chain, a silver fish service, and an illuminated testimonial.—Dr. R. Ryder has been presented with a complimentary address by the men employed by the Gas Light and Coke Company, Shoreditch Station, on the occasion of relinquishing his appointment as their medical officer.

SMALL-POX COMPENSATION CASE.—At the monthly meeting of the Accrington Local Board on Monday afternoon, a man named William Grant applied for compensation through having a small-pox case at his house. The person affected was a lodger, and Grant stayed from his work by advice of the medical officer of health, and also sent his family away, besides attending the sick man. He claimed £5, and £2 8s. worth of bedding destroyed, and it was ultimately resolved to award the applicant £3 in addition to replacing his bedding.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At a meeting of this corporation held on the 2nd inst., the following office-bearers were elected for the ensuing year:—President: Dr. Andrew Fergus. Visitor: Dr. J. B. Cowan. Treasurer: Dr. John Coats. Honorary Librarian: Dr. James Finlayson. Vaccinator: Dr. Hugh Thomson. Councillors: The President, *ex officio*; the Visitor, *ex officio*; the Treasurer, *ex officio*; Dr. J. G. Fleming, Dr. William Leishman, Dr. Henry Muirhead, Dr. J. D. Maclaren, and Dr. James Morton. Secretary and Librarian: Alexander Duncan, B.A.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The first meeting of the twenty-first session was held at the Royal Kent Dispensary, Greenwich-road, on Friday, Oct. 6th, Dr. John Miller in the chair. The following gentlemen were elected office bearers for the session 1876-77:—President: Thomas Creed, M.D. Vice-Presidents: John Prior Purvis, M.R.C.S.; W. Johnson Smith, F.R.C.S. Council: John Anderson, M.D.; Hughes Cable, M.R.C.S.; William Carr, M.D., F.R.C.S.; Ralph Gooding, B.A., M.D.; H. W. Jackson, M.R.C.S.; W. Lockhart, F.R.C.S.; F. Moon, M.B. Treasurer: Prior Purvis, M.D. Hon. Secretary: Harry Knight Hitchcock, M.D. Librarian: J. B. Saundry, L.R.C.P., M.R.C.S.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Great Northern Hospital has received £300 under the will of Mrs. P. R. Mark, of Kingston-on-Thames; Addenbrooke's Hospital, Cambridge, has received £200, less duty, under the will of Mr. Parfitt; the Royal London Ophthalmic Hospital has received £250 from the Rev. Henry H. Hughes.

HEALTH AND SEWAGE OF TOWNS.—A meeting of the executive committee of the Society of Arts in connexion with this subject has been summoned for twelve o'clock on Tuesday, the 24th inst., and an invitation has been addressed to the surveyors and medical officers of health of the vestries and district boards of works of the metropolis, asking them to attend, to meet the committee, and confer with them on the house drainage of the metropolis.

THE annual report of the sanitary condition of Southwark has been issued by Dr. Bateson, medical officer of health for the district. The death-rate during the past year was a little over 24 per 1000 annually. Of the 1393 deaths registered, 340 were caused by diseases of the zymotic class. Not a single death from small-pox was recorded—a circumstance which Dr. Bateson rightly uses to illustrate the benefits conferred by vaccination. Formerly in Southwark it was the cause of 80 out of every 1000 deaths. The mortality from whooping-cough and scarlet fever was somewhat in excess of the average annual number of deaths from these disorders, while phthisis showed no diminution in its prevalence.

PRIZE IN INDUSTRIAL HYGIENE.—A Mr. Shaw has offered a prize in connexion with this subject, to the Society of Arts, to be awarded every fifth year, the first in May, 1877. The prize is a medal of the value of £20. The following are the terms. "For any discovery, invention, or newly-devised method of obviating or materially diminishing any risk to life, limb, or health, incidental to any industrial occupation, and not previously capable of being so obviated or diminished by any known and practically available means." A full description of the invention or process must be given, illustrated if necessary by models, drawings, specimens, &c. The council of the Society of Arts reserve to themselves the right of withholding the prize in the event of nothing of sufficient merit being submitted. Those desirous of competing should communicate with the secretary of the Society, the latest date for receiving communications being March 31st, 1877.

DINNER TO MR. JOHN JACKSON.—A complimentary dinner was given at the Albion Tavern on Saturday, the 7th inst., to Mr. John Jackson, of Church-street, Spitalfields, which was attended by about 50 old friends of the guest. Mr. Jackson has been a hard and laborious professional worker for 35 years, and very few men in the district in which he laboured have upheld so honourably and so conscientiously the dignity and prestige of his craft. The dinner was organised on the occasion of his retirement from practice and from London, and a very convivial evening was spent. The chair was most ably occupied by Dr. Stephen H. Ward, and among the friends of Mr. Jackson assembled on this occasion were Dr. Robert Barnes, the Rev. S. Bardsley, Dr. Hilton Fagge, Mr. Critchett, Mr. Cartwright, Professor Bentley, Mr. Brodhurst, &c. Dr. Robert Fowler and Mr. Allingham were vice-presidents, whose administrative exertions greatly contributed to the success of the entertainment.

Medical Appointments.

ALLKIN, W. J., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the No. 2 District of the Ashton-under-Lyne Union, vice O'Brien, deceased.

BAYNE, T. L., L.F.P.S.G., has been appointed Assistant Medical Officer to the Barony Parish Hospital, Glasgow, vice Muir, resigned.

BLACKADER, A. D., M.D., M.R.C.S.E., late Acting Clinical Assistant at the Royal South London Ophthalmic Hospital, has been appointed Resident Clinical Assistant to the Brompton Consumption Hospital.

CANTON, A., L.D.S. R.C.S., has been appointed a Dental Surgeon to the National Dental Hospital, vice Perkins, deceased.

CASLEY, R. K., M.B., C.M., has been appointed House Surgeon to the Royal Surrey County Hospital, Guildford, vice McAldowie, appointed House Physician to the North Staffordshire Infirmary.

DEANE, J., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the South Hornsey District of the Edmonton Union, vice Down, resigned.

DIXON, W., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Woodbury District of the St. Thomas Union, Exeter, vice Jay, resigned.

FINDLAY G., M.D., C.M., has been appointed Medical Officer for the Middle District of St. Nicholas Parish, Aberdeen, vice Duncan, deceased.

FOLEY, J. J., M.R.C.S.E., has been appointed Medical Officer to the Workhouse and Fever Hospital of the Midleton Union, co. Cork, vice Buckmaster, deceased.

FOX, J. M., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Workington Port Sanitary District.

GRENNISH, R. W., M.R.C.S.E., has been appointed a Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest, Brompton, vice Bayly, whose appointment has expired.

HICK, H., L.R.C.P.Ed., M.R.C.S.E., has been appointed House Surgeon to the Clayton Hospital and Wakefield General Dispensary, vice Marriner, resigned.

JOSEPH, S. W. J., M.R.C.S., L.S.A., L.R.C.P.L., has been appointed House Physician to the Hospital for Women, Soho-square, vice Manser, resigned.

KAY, Mr. A., has been appointed House Surgeon to the Ayr Hospital, vice Young, whose appointment has expired.

KENNY, Dr. R. D., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Oulart Dispensary District of the Enniscorthy Union, vice Meehan, resigned.

MCAFEE, W., M.D., C.M., has been appointed a Resident Assistant House Surgeon to the Liverpool Dispensaries, vice McDonnell, resigned.

MORRIS, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Northern District of the Brighton and Hove Dispensary, vice Nicholls, resigned.

NASON, J. H., M.D., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Rathcormac Dispensary District of the Fermoy Union, co. Cork, vice H. W. Nason, L.R.C.P.Ed., L.R.C.S.Ed., deceased.

SMALLMAN, B. F., L.K.Q.C.P.I., L.R.C.S.I., has been appointed a Resident Assistant House Surgeon to the Liverpool Dispensaries, vice Biggar, resigned.

SPENCER, J. A., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, &c., for the Clonbrock Dispensary District of the Mountbellew Union, co. Galway, vice Kerans, resigned.

STEWART, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Mexborough Urban Sanitary District, until Sept. 29th, 1877, vice Fairbank, deceased.

WOODS, C. R., M.B., L.R.C.S.I., has been appointed a Resident Assistant House Surgeon to the Liverpool Dispensaries, vice Corscadden, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BEADLES.—On the 7th inst., at Park Lodge, Forest-hill, the wife of Arthur Beadles, M.R.C.S.E., of a daughter.

BOWEN.—On the 30th ult., at Talbot House, Claughton, Birkenhead, the wife of Essex Bowen, M.D., of a son.

CASSIDY.—On the 7th inst., at the County Lunatic Asylum, Lancaster, the wife of David McKaye Cassidy, M.D., of a daughter.

COE.—On the 9th inst., at Great George-street, Bristol, the wife of Robert William Coe, F.R.C.S.E., of a son.

FISHER.—On the 30th ult., at Kingstown, the wife of James William Fisher, M.D., Staff-Surgeon H.M.S. *Cruiser*, of a son.

GARDNER.—On the 30th ult., at Lendel-terrace, Paisley-road, Glasgow, the wife of John Gardner, M.D., of a son.

HOPKINS.—On the 5th inst., at Eastbourne, the wife of Alfred Boyd Hopkins, M.R.C.S.E., of a son.

KING.—On the 8th inst., at Charlton-villas, Willesden, the wife of T. R. King, M.D., of a daughter.

LEWIS.—On the 29th ult., at Loughton, Essex, the wife of W. T. Lewis, M.R.C.S.E., of a daughter.

MOSS.—On the 7th inst., at Thame, the wife of Herbert Campbell Moss, M.B., of a daughter.

SEXTON.—On the 20th July, at Poona, the wife of E. Sexton, M.D., Surgeon-Major 8th Regt. N. I., of a daughter.

THOMSON.—On the 10th ult., at Westgate, Peterborough, the wife of W. Thomson, M.D., of a son.

WRIGHT.—On the 4th inst., at Wellingborough, the wife of Joseph Brampton Wright, M.D., of a daughter.

MARRIAGES.

O'CONNOR—CARROLL.—On the 2nd inst., at St. Michael's Roman Catholic Church, Limerick, Francis William O'Connor, L.R.C.S.I., to Ellie, youngest daughter of the late Martin Carroll, Esq.

READY—CLARKE.—On the 25th ult., at St. Mary's Catholic Church, Newport, Mon., William G. M. Ready, M.R.C.S.E., to Frances Mary, daughter of John Clarke, Esq.

WATSON—HARVEY.—On the 4th inst., at St. John's, Newcastle-on-Tyne, Percival H. Watson, M.R.C.S.E., to Julia, daughter of the late James S. Harvey, Esq.

DEATHS.

BARTLEET.—On the 29th ult., suddenly, Edwin Bartleet, F.R.C.S., of Chipping Campden, Gloucestershire.

HILLIARD.—On the 2nd inst., at Lansdowne-road, Notting-hill, Dr. John Hilliard, late General Medical Inspector, Bengal Army.

LAWSON.—On the 6th inst., at Egremont, Cumberland, John Edward Spence Lawson, M.R.C.S.E., aged 44.

MAWSON.—On the 16th ult., at Burringham, Lincolnshire, Thomas William Mawson, M.B., aged 26.

SHAW.—On the 29th ult., at Handsworth, Birmingham, James Shaw, M.R.C.S.E., aged 36.

SIMOENS.—On the 6th inst., at Twickenham, Jeronimo Simoens, M.R.C.S.E., aged 85.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

CHINCHONA CULTIVATION IN INDIA.

WE learn from the recently published report of the progress and condition of India that the cultivation of the bark is very successful in most of the districts where it has been planted. In Sikkim there are now nearly three millions of trees in growth, a large proportion of which are the red variety, yielding a large quantity of alkaloid. The statement that "the inquiries of the Government quinologist have resulted in a cheap and efficient method of extracting the febrifugal alkaloids from chinchona bark" must interest all the manufacturers of quinine at home. In the Neilgherry Hills there are about 3000 acres under cultivation, most of which are private plantations. The manufacture of amorphous quinine having ceased in August, 1875, all the bark is now despatched to the London market for sale. In Bombay it has been decided, after a trial of ten years, to abandon the attempt to grow the plant on the Mahableshwar Hill, the climate being unsuitable. In Mysore there are two plantations, the bark being of a somewhat inferior quality, yet efficient in checking ordinary attacks of intermittent fever. In British Burmah the cultivation of the bark is carried on with success. The Indian Government, however, has decided not to manufacture quinine in this Province. We are glad to find in the official report that the mode of spelling the name of the bark—chinchona,—long taught by us, is adopted.

A. J. L.—A report on Filters appeared in THE LANCET in the year 1867.

MEDICAL EDUCATION AT CAMBRIDGE.

To the Editor of THE LANCET.

SIR,—Mr. W. H. Blackett Crofts, in his letter (THE LANCET, Sept. 30th), commenting on mine in your issue of Sept. 16th, attributes to me statements which I have not made. As I cannot ask for space enough for a complete reply, I beg those of your readers who are interested in his letter to compare it with mine.

A few words may suffice to justify my charge. The estimate of £50 a year for three years is in my letter carefully defined as "the minimum expenditure by which the ordinary B.A. degree can be obtained." I enumerate causes of reasonable additions to this estimate. I analyse the £50 so as to show what is covered by it. Referring to this analysis, Mr. Crofts transfers a sum of £3 3s. from one of my sentences to another, and then is surprised at my arithmetic. The rest of the sentence from which the £3 3s. is removed he ignores altogether when he denies that I have provided for payment for College lectures or books and stationery, though for these, with the £3 3s. paid once for all, I had allotted £10 a year. But these are trifles compared with his misconception of my main statements. When I have twice in my letter mentioned £85 a year as the probable Cambridge expenditure of a medical student, it shows more than ordinary carelessness to comment, as if I had said that £50 a year was enough for this.

Elsewhere in his letter Mr. Crofts refers to statements to which he does not assign an author, and which he regards as misleading. The connexion in which the reference to these statements is made leads me to suppose that Mr. Crofts regards me as the author of them. In the "Student's Guide to the University of Cambridge," to which Mr. Crofts had ready access at Cambridge, is contained a paper by me on Non-Collegiate Students, in which I say that some such students have found £50 a year sufficient to meet all their Cambridge expenses. But it is there shown, with a fulness of detail for which I could not claim space in my letter to you (THE LANCET, Sept. 16th) what items of expenditure are included in that sum, and the following sentences are appended to the tabular statement of which that is the result:—

"In this estimate books are assumed to be provided otherwise, as well as clothes, travelling, and other personal expenses. But some have found it possible to save enough out of [two of the items accounted for] to provide the few books that are absolutely necessary. As there are always some who are adapting their expenditure to this estimate, the frugal non-collegiate student of small means will find companions ready to approve his mode of living. Those who can fairly spend £70 a year [medical students are not here in question] will be in comparative ease, and may supply themselves with adequate books and other conveniences for study. Of course even in this second estimate strict regard for economy is required."

Was it to this statement that Mr. Crofts' complainants intended to refer, when they said they had been misled? If they were unable to combine the statement of a minimum outlay with the warnings with which I guarded it, I regret that they did not take me into their confidence. Can Mr. Crofts give us a detailed statement of their expenditure?

Meanwhile I claim Mr. Crofts as a witness to the correctness of my general results. If to the £85 a year which I mention as the University expenditure of a medical student there be added a sufficient sum for clothes and travelling expenses (which I exclude, but Mr. Crofts apparently includes), the result will not fall far short of the £100 on which Mr. Crofts thinks a medical student can "be happy." And yet I have not professed to provide for the "good place in a Tripos," the "coaching even for the ordinary examinations," the being "ploughed," and consequently repeating examination fees, of which Mr. Crofts makes mention. I have assumed that the student comes up with such intelligence and in such a state of preparation as to find College lectures a sufficient help to pass an easy qualifying examination (the "Previous examination" or "Little Go"), and that by making fair use of his time and abilities he satisfies the ordinary requirements of the University in the rest of his course.

I am, Sir, yours obediently,

Cambridge, Oct. 5th, 1876. H. B. SOMERSET.

A Subscriber, (Manchester.)—1. Dr. Parkes's book will be found, on the whole, the most useful.—2. Full information may be obtained on application to Dr. Paget, Cambridge.

Mr. Ridgway.—We cannot recommend a particular surgeon.

THE DONCASTER SANITARY AUTHORITY.

THE rural sanitary authority of Doncaster, which comprises the whole of the union of Doncaster except the Local Board districts of Doncaster, Tickhill, Mixborough, and Askern, are advertising for a medical officer of health, who must reside within the union. The salary offered is £250 per annum, and the elected candidate will have to devote his whole time to the discharge of the duties of the office, although it is stated that, with the consent of the sanitary authority, he may accept a similar appointment in any sanitary district included in or adjoining the Doncaster Union. The appointment is to be held from year to year, determinable at any time by six months' notice. If, however, such notice should emanate from the sanitary authority, it is to be sanctioned by the Local Government Board. The election will take place at Doncaster on the 31st inst. There are several features in this announcement which afford satisfactory evidence that the Doncaster rural sanitary authority are anxious to appoint a medical officer of health to do real sanitary work, although they would probably have been more successful if they had offered still greater security of tenure, and could have arranged to form the entire union into a combined district, so as to provide a salary which would tempt an efficient candidate to devote his whole time to this branch of the profession.

ERYSIPELAS AND PUERPERAL FEVER.

To the Editor of THE LANCET.

SIR,—I observe in THE LANCET of the 23rd ult. a notice concerning the identity (or coincidence) of erysipelas and puerperal fever. I just wish to relate the following case, which will in a measure bear out the idea suggested by "an American physician."

Some months ago a friend was attending a very severe case of phlegmonous erysipelas of the arm, and at the same time was discharging his obstetric duties, which were, however, somewhat few at this particular time. My friend was called almost directly from this case to attend Mrs. A—— in labour, and obeyed the summons. A rather tedious labour ensued, and she brought forth a child. Nothing occurred in the various stages of labour to cause any anxiety; but in due time puerperal fever set in, and Mrs. A—— died.

My friend had on the following day a summons to attend Mrs. Z——, and on this occasion he had time and opportunity to wash and put on a change of clothing. Mrs. Z—— escaped; and as Mrs. A—— was manifesting unfavourable symptoms, my friend desired me to make the subsequent visits on Mrs. Z—— in order that she might be thoroughly isolated.

This is a record of the only case of puerperal fever my friend has had in the course of a large obstetric practice of thirty years' standing. Other cases of erysipelas in my friend's practice have not been followed by puerperal fever in the obstetric cases, and perhaps for the same reason Mrs. Z—— went on quite well.

One of the common rules in the obstetric teaching of Professor Simpson, and no doubt of others as well, is that the practitioner should always divest himself of his fever visiting clothing and wash before attending an obstetric case, and I observe that special stress is placed on erysipelas by Professor Simpson.

I am, Sir, yours faithfully,

October 3rd, 1876. X. Y. Z.

H. J. will find much information on the marriage of persons who have suffered from insanity in "Heredity," by Th. Ribot (published by Henry King, Cornhill); in Child's "Essays on Physiological Subjects" (Longmans); and in the article "Hérédité" in the Nouveau Dictionnaire de Médecine et de Chirurgie (Baillière), which contains a very full bibliography of the subject. For an account of dipsomania, see Foville, Archives Générales de Médecine, October, 1867; and the articles "Alcoholism" in the two French Dictionaries of Medicine now in course of publication.

RUPTURED SPLEENS.

To the Editor of THE LANCET.

SIR,—In connexion with your article in this day's LANCET, on "Manslaughter by Rupture of the Spleen," the following case may be of interest.

On Saturday, Sept. 30th, J. B——, aged fifty-eight, was brought home in a state of intoxication. He lay down on a sofa in his sitting-room in what his family considered to be a drunken sleep, which they did not mind, having frequently seen him so before. Shortly after 9 P.M. they noticed a change in him, and I was sent for. I found him in a state of collapse, and in a quarter of an hour he was dead.

An inquest was held, and the post-mortem revealed a diseased condition of all the internal organs; most intense congestion of the abdominal viscera; the cavity of the peritoneum was filled with blood; and the spleen, which was enlarged and very soft, ruptured.

There being no evidence of a blow or any kind of external injury, nor of any violence having been used towards him, the jury returned a verdict of "Death from natural causes."

I am, Sir, yours &c.,

FRANCIS EGAN, L.K.Q.C.P.I.

Moor-park-villas, Fulham-road, Oct. 7th, 1876.

Dr. J. Reid.—Application to join the Turkish army in a medical capacity should be made to the Turkish Ambassador in London, Musurus Pasha. To join the Servians, the National Aid Society should be written to.

PROOF OF DEATH.

To the Editor of THE LANCET.

SIR,—Looking over some old numbers of THE LANCET, I find this subject variously discussed, and would suggest the following as decisive proof. Let fall a drop of sealing-wax on the surface of a corpse. A blister will form equally as in the case of normal health, but with this difference—the vesication of the former will contain an aerial fluid; the latter a watery liquid.

The character of the vesication in the case of the six corpses conveyed to Haslar from the *Thunderer* would have indicated to the jury the fact as to whether death was the result of other lesion independent of scald.

Yours &c.,

Oct. 7th, 1876. HUGH T. S. BEVERIDGE, M.D., Royal Navy.

ENAMELED COOKING VESSELS.

A LATE number of the *Analyst* publishes a paper read by Mr. R. R. Tatlock before a meeting of the Society of Public Analysts in Glasgow on "Enameled Cooking Vessels." It is pointed out, in the first instance, that the Food and Drugs Act, 1875, does not contain any provision for dealing with the sale of dishes or vessels which, from the nature of the materials of which they are manufactured, must in many instances introduce poisonous ingredients into the food and drink which may be prepared in them. Mr. Tatlock made a series of experiments with the enamels in general use, one result of which showed that it was possible to obtain a fatal dose of arsenic from one ounce of the enamel of a vessel intended for cooking purposes. It is contended that the employment of poisonous ingredients, such as arsenic and lead, used to produce a perfectly white enamel, can be dispensed with without detriment to the appearance of the article. This is a field of inquiry which claims greater attention from chemists than it has hitherto received.

REPRESENTATION IN PARLIAMENT OF THE UNIVERSITIES OF EDINBURGH AND ST. ANDREWS AND OF GLASGOW AND ABERDEEN.

To the Editor of THE LANCET.

SIR,—When a member of the medical profession, whether one in actual practice, as Sir D. Corrigan, or one who has gone through the curriculum of medical study and taken his degree or licence, but does not practise or has ceased doing so, gets into Parliament, it is a matter of satisfaction to the profession as a whole. So also it is matter of regret, often strongly expressed, that there are so few avenues open to the profession whereby one of its members might get into Parliament.

Now I desire, through you, to put in the view of the profession generally, and of those whom it may concern more immediately, that as soon as, or whenever, the medical graduates of the four Scottish Universities shall choose to make common cause, sinking party politics for the sake of professional ends, the two seats these Universities possess are at the command of the profession. This will at once appear as regards Glasgow and Aberdeen by a reference to the following figures:—

Glasgow University.

Constituency, 2857. This number comprises of medical graduates and surgeons that are M.A.s 968

Aberdeen University.

Constituency, 2160; comprising of medical graduates ... 805

Joint strength of the medical vote 1773

Or more than one-third of the whole constituency, which amounts to 5217.

How the case stands with Edinburgh and St. Andrews I do not precisely know. But there is every reason for believing that the medical vote there is still stronger, while in point of fact the Universities in question are represented by a medical man in the person of Dr. Lyon Playfair. The figures given as regards Glasgow and Aberdeen have been carefully reckoned up, and may be relied on, making allowance for, peradventure, one or two or a few errors of oversight. Doubtless Edinburgh and St. Andrews will *continue* to be represented by a medical man. But why should not Glasgow and Aberdeen be so represented? It is simply due either to the apathy of its medical graduates or to an utter want of organisation among them, referable to their ignorance of their strength. The other day a splendid opportunity offered for securing the seat for the profession. Dr. Robert Farquharson, a gentleman of independent fortune, and of high character as a professional man in London, was willing to contest the seat with the Conservative candidate; but not being adequately supported by the profession he had no help for it but to retire from the field. What were his chances had he stood, assuming that on a fair view of these the Liberal part of the constituency generally were willing to withdraw their pet candidate, Dr. Anderson Kirkwood, LL.D., a lawyer? A word or two will show. There have been three elections since the seat was given by Mr. Disraeli. Two were contested; one was not. On the first occasion the Liberal candidate (Mr. Moncrieff) beat the Conservative candidate (Mr. Gordon) by about two score votes. On the next Mr. Gordon beat Mr. Moncreiff by a (Conservative) majority of between 400 and 500 votes. But supposing that the strength of the Conservative party in the two Universities has increased (and there is good reason to believe that it has), "what are they among so many"? Let the Conservative majority rise to 600, what is that to 1773 medical votes, given largely on both sides, Whig and Tory, in behalf of the medical candidate, and simply *because* he is a professional man? No doubt, of the 1773, not a few would stand by their political party, not by the profession. But I cannot but think that had a medical candidate been put forward, he would certainly and easily have beaten the Conservative majority, and carried the day. 350 votes (counting double) given by Conservative members of the profession to the medical candidate (albeit a Liberal) would have turned the scale. In fact, many fewer would have sufficed, or would suffice. A Conservative myself, I was willing to give my vote and support to the Liberal medical candidate. And so were many others that I know; and my belief is that had Dr. Richardson or Dr. Farquharson stood, he would have won the seat for the profession and for the Liberal party. As it is, the seat is lost to both.

What is needed for the future is an "Association in London, or with its head-quarters in London, of medical graduates of the two Universities (and of Edinburgh and St. Andrews as well) for the promotion of professional interests in Parliament, irrespective of party politics." Will you lend a helping hand towards the formation of such an Association? I repeat that these two seats are seats for the profession whenever the profession chooses to make them such.

Your obedient servant,

October 5th, 1876. A CONSERVATIVE M.D.

*** Our correspondent is in error in supposing that Dr. Lyon Playfair, M.P. for Edinburgh and St. Andrews Universities, is a medical man. The right hon. gentleman holds the degrees LL.D. and Ph.D. His scientific pursuits have been chemical. We must protest against the importation of political considerations of any kind into this question. The object should be to secure a representative of the medical profession in Parliament pure and simple.—ED. L.

MEDICAL CERTIFICATES OF CAUSE OF DEATH.

SOME criticism has been called forth on a certificate of the cause of death in a case at Wigan. The practitioner in question assigned death to "(a) sprain in groin, (b) typhoid fever," and the certificate was characterised as another illustration of the incautious manner in which doctors' certificates are sometimes given. The causes mentioned are certainly not frequently met with in combination. But though at first sight they seem incongruous, there is nothing impossible in their being associated in the same case. It is most desirable that medical men should fill up death certificates with great care and intelligence. It is not undesirable even that these certificates should be criticised, and that genuine incongruities should be pointed out. But we suspect we should never have heard of this instance had the coroner not been by the form of the certificate put to the trouble of what he considered an unnecessary inquest. The case was evidently somewhat complicated and obscure, the chief facts being pain in the groin after the history of a sprain, fever of a low typhoid character, embolism, followed by gangrene of the foot. The fever might, of course, be typhoid in character without being actual typhoid, and we should require strong evidence of specific typhoid before accepting the view that it was such.

Mr. Hy. Brown should refer the matter to the Managing Committee. We must decline to notice the "snub."

Dr. Dowse.—Declined with thanks.

PRIVATE PRACTITIONERS *versus* MEDICAL OFFICERS OF HEALTH.

To the Editor of THE LANCET.

SIR,—I have at present under my care a private patient suffering from scarlatina, a very mild attack and from which the child is now recovering. To-day the medical officer of health visited the house, and told the mother that she was on no account to allow anyone to leave the house, except to go into the garden, and that she must not go or send into the village. Now I am ignorant of the state of the law; but if that is the law it seems very absurd. Supposing the baker or the butcher neglected to call, and they have no provisions in the house, are the people in the house to starve because the law forbids them to send for anything they may require? I should feel obliged if you would inform me if any such law exists, and also if you would recommend me some book containing the laws relating to sanitary matters.

I am, Sir, yours &c.,

Great Missenden, Oct. 4th, 1876. J. O. M'CREERY.

*** The law applies to infected persons or things, and it does not seem to contemplate restrictions of the kind here referred to. Paragraph 3 of section 126 of the Public Health Act, 1875, provides that any person who "gives, lends, sells, transmits, or exposes, without previous disinfection, any bedding, clothing, rags, or other things which have been exposed to infection from any such disorder" shall be liable to penalty. It is not clear whether the exposure here stated would include the clothing worn by a person in attendance upon the sick; but if the section be read as applying to the clothing worn by all persons indifferently occupying the same house, the simple course would have been at once to shut up the house and its inmates, put a guard over them, and have, as customary in plague times, a red cross on the door, with the inscription "Lord have have mercy upon us!" The course advised by the medical officer of health in the present instance appears to amount very much to the old plague practice—a practice which, as is well known, defeated itself by supplying numberless necessities for breaking the law, and which increased the prevalence and fatality of the disease by ensuring its spread to every susceptible member of an infected house. Possibly the wording of the Act was designedly loose in this matter so as to leave room for judgment where the circumstances of the chances of danger might largely vary; but we doubt whether this wording will support the advice of the medical officer of health stated above. Our correspondent will find it best to purchase the Public Health Act, 1875, for his guidance, which he will readily obtain through a bookseller. If, however, he desires to have the Act in the more costly form of a text-book, Mr. Lumley's annotated edition of the Act, published by Shaw and Sons (price 25s.) will serve him best.—ED. L.

Spero.—We suppose the other candidate was chosen on account of his testimonials. The Managing Committee who made the appointment are not responsible to anyone.

TREATMENT OF SUNSTROKE.

To the Editor of THE LANCET.

SIR,—I regret very much that I have been unable until now to reply to the letter of Dr. Hall contained in THE LANCET of Sept. 30th.

In answer to Dr. Hall's inquiry as to what induced me to adopt the hypodermic injection of quinine treatment, whether it was an idea of my own, or in consequence of some paper that I had read, permit me to say that I had the good fortune to have read a paper written by him, in which he relates the particulars of a case in which recovery followed after hypodermic injection of quinine. The main idea which actuated me in adopting that method in the case which occurred at the Bristol Royal Infirmary was, in the first place, the urgent indication of some antipyretic remedy of speedy action, as the striking feature of the case was the intensely pungent burning heat of skin. Naturally the first remedy that suggested itself to me was quinine, and, as the patient was unable to swallow, I determined to inject it hypodermically.

Without wishing for one moment to detract from the credit which unquestionably belongs to Dr. Hall of having first successfully adopted that method of treatment, I am obliged to say that I had not in my mind his case when I tried the plan. I decided to give quinine, and being unable to get it into the stomach of the patient I put it under the skin.

I am, Sir, your obedient servant,

Bristol Royal Infirmary, Oct. 11th, 1876. HENRY M. CHUTE.

TARIFF OF CHARGES.

A Surgeon suggests that the difficulty of recovering fees at law might be lessened by a fixed rate of charges. Of course if what is termed a "custom" could be established, the question of amount would not be submitted to a jury, but ruled by the Court. It is, however, not easy to see how "a tariff of maximum charges" could be adopted when so much depends—in country districts especially, where cases calling for legal procedure chiefly occur—upon the conditions of distance, time, and the circumstances of the patient, all which must affect the question of fitness as to the amount claimed. The disadvantage of referring a dispute involving considerations such as these to the judgment of a jury, particularly one composed of residents in the neighbourhood, must be self-evident; but we fail to find a remedy unless the case be removed.

A. M. G.—Consult any respectable practitioner, and avoid advertising quacks.

GOUT AND ALCOHOL.

To the Editor of THE LANCET.

SIR,—Allow me to make a few remarks on the influence of alcohol upon gout.

I inherit the disease from my father, and my mother's father also suffered severely from it. In 1863, when staff surgeon of H.M.S. *Britannia*, there was an epidemic of scarlet fever amongst the naval cadets, and during its prevalence my throat became inflamed, with accompanying febrile symptoms, on recovery from which there commenced attacks of gout in the feet, recurring at short intervals. From 1863 (then aged forty-five) until the spring of 1875 there were three or four attacks annually. In 1869 beer and spirits were discontinued. From July, 1873, to July, 1874, my only drink was one glass of claret in a tumbler of water at dinner; but as the attacks continued I then gave up that. Between July, 1874, and June, 1875, there were several mild attacks. Since July, 1875, one only of four days' duration, which did not confine me to the house.

It would be well to mention that, as an attack of gout so often followed the eating of Devonshire cream with fruit puddings, the use of cream has been avoided during the last eighteen months.

The above facts might prove useful to others predisposed to, or sufferers from, the above painful disease.—Yours faithfully,

W. M. SAUNDERS, M.D.,
Plymouth, Oct. 10th, 1876. Retd. Dep. Insp.-Gen., R.N.

Volunteer.—No official circular or memorandum, as far as we are aware, has been issued from the War Office relative to this subject since the regimental system was abolished in the army. Application should be made to the Army Medical Department, Whitehall-yard.

Mr. L. G. Thompson is thanked.

TAKING THE BULL BY THE HORNS.

IT were much to be wished that local health authorities would, when confronted by outbursts of zymotic disease, have the courage to adopt a similarly straightforward course to that which has just been taken by Dr. Strange, the medical officer of health for the city of Worcester, who has addressed the following letter to the local newspapers:—

SCARLET AND OTHER FEVERS.

DEAR SIR,—Scarlet fever prevails extensively in this city, and in most of the towns and villages in the district. It appears to me to be advisable again to warn the public of their responsibilities in this matter. The clothing, bedding, &c., of all persons who have had any contagious disease, and also that of all persons who have been directly exposed to the contagion, ought to be immediately disinfected in the most efficient manner by means of heat.

Moreover, the law is now very strict in requiring all persons who have been ill of any infectious disorder, or who have been in contact with such persons, to avoid spreading the contagion by means of cabs, omnibuses, railways, or other public conveyances. For the purpose of disinfection, I wish it to be known that it is only necessary to send articles of clothing, bedding, &c., to the hospital at Barbourne, where a proper apparatus is always in readiness. There is no charge for disinfecting the clothing of the poor.

I am Sir, yours faithfully,

WM. STRANGE, M.D.,
Worcester, Oct. 6th, 1876. Medical Officer of Health.

P.S.—If after this notice persons are not more careful with regard to this matter, they will be morally, and I believe *legally*, guilty of spreading infectious disease.

This is the true spirit in which to fight the battle so widely set in array at this time by the hostile forces of health- and life-destroying maladies. Pity that so little of this spirit is abroad when it is most needed.

A. H. N.—There are very few appointments of the sort inquired after by our correspondent in either country now. We do not suppose there are half a dozen in Canada. In India, we believe, they are, as a rule, filled up by ex-army medical officers.

A Medical Student has no redress. He must try again, and take care not to have a "violent headache" next time.

Mr. Brookes, (Much Wenlock.)—The subject shall receive our attention at a future time.

TRANSFUSION.

To the Editor of THE LANCET.

SIR,—Dr. Aveling asks Mr. Wartenberg in what respect the action of his instrument was unsatisfactory in my recent case of transfusion. Perhaps it would have been better, in his account of the case, to have made no mention of the attempted use of the instrument, as I cannot say that it was fairly tried. I believe that I neglected to fill it with water before introducing the nozzle into the vein, and to this cause probably it was due that the blood would not flow. Being desirous not to lose time, I then at once laid the instrument aside in favour of the method I was more familiar with.

Yours &c.,

Manchester, Oct. 9th, 1876. JAMES HARDIE.

BOOKS FOR SENIOR STUDENTS.

THE suggestion of *An Assistant* is good; but it is not so easy of adoption. In many respects the literature for the Edinburgh examinations is quite different from that suitable for those of the metropolitan boards. In proposing the following works we wish it to be distinctly understood that there are many excellent books not included in the list. When more than one author is named, selection may be made indiscriminately:—Surgery: Spence, Pirrie, or Bryant. Surgical Anatomy: Roser, and the chapters in the ordinary Anatomical text-books, and in Bell's Operative Surgery. Medicine: F. Roberts, Bristowe, or Tanner. Midwifery: Leishman or Lloyd Roberts. Materia Medica: Seoresby Jackson, Royle, Garrod. Medical Jurisprudence: Guy or Taylor.

SANITATION AT PENZANCE.

To the Editor of THE LANCET.

SIR,—It would be very unfair to the long-established reputation of Penzance as a summer and winter health-resort if "Esplanade's" letter regarding its sanitation should go forth without positive contradiction. So far from sanitary matters not being looked after in Penzance, there are but few towns of the same size where more in that direction has been done. The system of sewerage is perfect, communicating with every house, and finally emptying into the sea below low-water mark. Water of excellent quality, brought from a distance of two miles, is also supplied to every house; and though, from the necessary enlargement of the second reservoir during the last three months, the supply has been limited to sixteen out of the twenty-four hours, in the course of a fortnight we shall have a steady flow of at least sixty gallons per diem for every inhabitant. We have an urban sanitary authority, a medical officer of health, and an inspector of nuisances, all actively employed in their duties. During the last quarter our death-rate has been certainly higher than usual; but this increase has been due to the admission of twelve deaths in this district (not the town alone) from infantile diarrhœa, no doubt the result of injudicious food. No death from typhoid or other preventable disease has been recorded for months.

Your obedient servant,

Oct. 9th, 1876. F.R.C.P.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Spence, Edinburgh; Dr. Douglas Powell, London; Dr. Donkin; Mr. Le Neve Foster, London; Dr. Wilkinson, London; Mr. Snell, Sheffield; Mr. Teevan, London; Mr. C. Roberts, London; Mr. Whiting, London; Mr. Smith, Greenwich; Mr. Somerset, Cambridge; Mr. Dickens, Bootle; Mr. Force, Exeter; Mr. Cameron, Dalmally; Mr. Thompson, Aberdeen; Mr. Reed, Ferrybrae; Dr. Stevenson, London; Mr. Cheeswright, Rotherham; Dr. Gamgee, Owens College; Dr. A. B. Shepherd; Mr. A. Kershaw; Mr. Morris, Abergavenny; Mr. Macdonald, Lochmaddy; Dr. Turnbull, Liverpool; Dr. Monson, Canonbury; Mr. Ridgway, Sheffield; Mr. Groves, London; Mr. Barker, Bombay; Mr. Daldy, Bombay; Dr. Blané, Bombay; Mr. E. Smith; Mr. Woods, Southport; Messrs. Debenham, Tewson, and Farmer, London; Dr. Buchanan, Glasgow; Mr. Barnish, Wigan; Mr. Crean, Glenview; Dr. Egan, Fulham; Mr. Annandale, Edinburgh; Mr. Johnson, Scarborough; Mr. Carnes, Westport, New Zealand; Dr. Dowse, Highgate; Mr. Macmillan, London; Dr. Hunter; Dr. Moir, Edinburgh; Dr. Tatham, Salford; Dr. Wadsworth, Dalston; Mr. Anningson; Dr. Smith, Kilburn; Surgeon-Major Porter; Mr. Brown, Northallerton; Mr. E. C. Shoppee; Mr. Bradford; Dr. Garrett, Cardiff; Dr. Marshall; Mr. W. Moxon, Birmingham; Dr. Bramwell, Newcastle; Dr. Hardy, Manchester; Mr. Bishop, London; Dr. Saunders, Plymouth; Mr. Holland; Dr. Nicholson, Manchester; Mr. Watkins; Mr. Freeman, Bootle; Mr. Clayton, Spalding; Mr. Ward; Dr. Quin; Dr. Pierson, Dresden; Mr. Meadows, Hastings; Dr. Moore; Dr. Berry, Wigan; Dr. Jackson, Sheffield; Dr. de Chaumont, Woolston; Mr. Rush; Dr. Morris, Nottingham; Dr. Rayne, Manchester; Dr. Burder, Bristol; Mr. Cowell; Mr. Banks, Liverpool; Mr. Haviland, Bedford; Dr. Chute, Bristol; Dr. Dickinson, Islington; Mr. Tuck, London; The Dean of Guy's Hospital; Observer; The Secretary of University College; A Conservative M.D.; An Assistant; A. M. E.; R. P. W.; A Medical Student; The Secretary of King's College; B., Annington; F. R. C. P.; The Registrar-General of Edinburgh; Z. Z. Z.; A Surgeon; The Secretary of Leeds School of Medicine; A. J. L.; W. R.; Nemo; S. B.; J. M.; Medicus, Bradford; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Rutherford, Newcastle; Mr. Phelps, Freshwater; Mr. Worsley, Ryde; Mr. Frampton, Weston-super-Mare; Messrs. Porteous and Co., Glasgow; Mr. Williams, Abertillery; Mr. Rose, Stornoway; Dr. Mason, Hull; Mr. Coward, Huddersfield; Mr. Duke, Dominica; Mrs. Chapman, Putney; Mr. Utting, Moretonhampstead; Dr. Davidson, Nenthead; Dr. Duckworth, Otley, Mr. Morris; Mr. Cooper; Mr. Brown, Rochester; Dr. Wilson, Rosendale; Mr. Roberts; Mr. Ross, Salisbury; S. G., Kingsland; Medicus, Lambeth; X. X., Wigan; M. M.; W. F.; S. C. R.; J. A. L., Nayland; Surgeon, Bradford; D. W.; Medicus, Sheffield; Gamma, Leicester; X. Y. Z.; Xema; M.D., Saltburn; Delta, Stockton-on-Tees; N. H.; P. L., Rugby; A. B.; Medicus, Roughan; M.D., Newcastle; Beta; M.R.C.S., Malton; R. D. A., Edinburgh; W., New Romney; Medicus, Lingfield; Biceps; S. A., Preston; L. B.; Q. B.

Newcastle Chronicle, Welshman, Western Morning News, Liverpool Post, Public Leader, Manchester Guardian, East London Observer, Calne Chronicle, Wigan Observer, Surrey Advertiser, Isle of Wight Journal, Record, Brighton Examiner, Northampton Herald, and *Brighton Daily Post* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, OCT. 11TH, 1876.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 8 A.M.
Oct. 6	29·88	S.E.	61	63	...	72	59	...	Overcast
,, 7	29·91	S.W.	62	64	...	68	61	...	Overcast
,, 8	29·97	S.W.	62	63	...	66	59	0·08	Overcast
,, 9	29·56	S.W.	60	64	...	66	61	0·05	Cloudy
,, 10	29·56	W.	56	56	...	59	55	0·09	Raining
,, 11	29·36	S.W.	56	59	...	63	54	0·31	Cloudy
,, 12	29·71	S.W.	52	56	...	...	51	0·20	Cloudy

Medical Diary for the ensuing Week.

Monday, Oct. 16.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Address by the President, Mr. Wm. Adams.

Tuesday, Oct. 17.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be exhibited:—Cases of Croup; Medullary Sarcoma of Lung and Bronchial Glands causing Obliteration of Inferior Cava; General Anchylosis of Ribs; Aneurism of Pulmonary Artery in Vomica of young Child; Anteflexion of Uterus; Absence of one Kidney; Lymphadenoma of Stomach; Aortic Aneurism; Cancer of Bladder; Injury to Spine; Tumour from Upper Lip containing Cartilage; Popliteal Aneurism; Sarcoma of Thigh; &c. &c.

Wednesday, Oct. 18.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Oct. 19.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HARVEIAN SOCIETY.—8 P.M. Dr. J. M. Fothergill, "On Anhydrotics."

Friday, Oct. 20.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
MEDICAL MICROSCOPICAL SOCIETY.—8 P.M.

Saturday, Oct. 21.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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